

REGION 4

Laboratory Services and Applied Science Division 980 College Station Road Athens, Georgia 30605-2720

May 17, 2023

MEMORANDUM

SUBJECT: PFAS Analytical Sampling Results

Sanford Cleaners

LSASD Project #: 23-0151

FROM: Paula A. Whiting, Environmental Engineer

Hazardous Waste Section Field Services Branch

THRU: Kevin Simmons, Acting Supervisor

Hazardous Waste Section Field Services Branch

TO: Erik Spalvins

Remedial Project Manager

Restoration and Sustainability Branch

Superfund and Emergency Management Division (SEMD)

Attached are the PFAS Analytical Sampling Results for Sanford Cleaners conducted on March 16, 2023, in Sanford, Florida. A total of 5 wells (1 background upgradient, 3 source, 1 downgradient) were sampled.

The Florida Department of Environmental Protection (FDEP) has calculated provisional GCTLs for PFOA and PFOS. The calculations were completed in accordance with Chapter 62-777, Florida Administrative Code (F.A.C.), equations and methodology. The provisional GCTLs for PFOA and PFOS concentrations are 70 nanograms per liter (ng/l), and 70 ng/l for the sum of PFOA and PFOS concentrations. The results revealed PFOA concentrations more than 70 ng/L at two locations (DEP2S and DEP4S).

SEMD requested that the results be referenced against the Regional Screening Levels (RSL) Tapwater (Drinking Water) May 2023 THQ=0.1 instead of the RSL Maximum Contaminant Level (MCL) May 2023 THQ=0.1 which is used to compare the natural environment instead of industrial and/or residential. The results revealed PFOA concentrations exceeded the 0.04 μ g/L at two locations (DEP2S and DEP4S).

Additional information concerning the wells and the sampling are attached as: Sanford Cleaners Monitoring Well Information (**Table 1**), Sanford Cleaners Data Summary – PFAS (**Table 2**), Sanford Cleaners Well Locations map (**Figure 1**), the Sampling Calibration and Field Logbook (**Attachment 1**) which contain the monitoring well purge data and sampling notes, and the final PFAS Analytical Data Sheets (**Attachment 2**).

LSASD noted the following well conditions and recommendations needed to these wells based on field observations and logbook notes:

- Four wells were not measured for depth to water because the well casing diameters were too small for the water level probe.
- Due to the previous persulfate extraction treatment DEP3S, DEP4S and TW03S had very high turbidity and took up to 3 hours to purge to obtain a reading below or near 10 NTU.
- Well DEP3S purged dry within the first minute. LSASD allowed the well to recharge at 20-minute intervals before checking turbidity. When the turbidity dropped below 20 NTU, the water quality measurements were taken at 5-minute intervals at very low peristaltic pump speed. The final NTU was taken at 12.7 NTU. LSASD made the decision to sample because the continuous draw down of the well reset the readings to the initial pre-purge higher readings.
- The bottom of Well TW03S was cleaned out after the initial purge pumped out black silty material. This well historically has had high turbidity and LSASD increased water quality times from 5-minute to 20-minute intervals.
- The bottom of Well DEP4S was cleaned out after the initial purge pumped out black silty material. The well head was missing the 2-inch well cap which could be the potential reason for the silty material in the bottom of the well. The well cap needs to be replaced.

If you have any questions or comments, please contact me by phone at (706) 818-5926 or email at whiting.paula@epa.gov.

Attachments

cc: Scott Miller, SEMD
Derek Matory, SEMD
Sandra Aker, LSAD

LSASD Project ID: 23-0151

Sampling Investigation Final Report



Florida Dry Cleaners

Location: Sanford Cleaners
121 N. Palmetto Avenue
Sanford, Florida 32771

Project Dates: March 17, 2023

Report Date: May 17, 2023

Project Leader: Paula A Whiting

Hazardous Waste Section
Field Services Branch
Laboratory Services & Applied Science Division
USEPA – Region 4
980 College Station Road
Athens, Georgia 30605-2720

The ANSI National Accreditation Board attests that U.S. EPA Region 4 Laboratory Services and Applied Science Division fulfills the requirements of ISO/IEC 17025:2017 ANAB Forensic Testing & Calibration AR 3125:2019 in the field of Forensic Testing. The activities contained in this report fall within the scope of accreditation, Certificate Number: AT-2628. Expires 08 June 2024.



Project Requestor:

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Analytical S	Support	
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Laboratory Services Branch Laboratory Services & Applied Science Division US Environmental Protection Agency - Region 4 980 College Station Road Athens, Georgia 30605

Approvals:	
LSASD Project Leader:	
Paula A Whiting	Date
Hazardous Waste Section	
Field Services Branch	
Approving Official:	
Tr - S	
Kevin Simmons, Acting Supervisor	Date
Hazardous Waste Section	

This Sampling and Analysis Plan (SAP) is designed to be used in conjunction with the *Applied Science Branch Quality Assurance Project Plan* December 2019.

Field Services Branch

Table 1: Sanford Cleaners Monitoring Well Information

Well	Latitude	Longitude	Total Depth (feet bgs)	Screen Interval (feet bgs)	Notes
DEP2S	28.811089	-81.265836	15	10-15	Background upgradient well
DEP3S	28.811132	-81.265466	15	10-15	Source well
TW03S	28.811183	-81.265465	20	5-20	Source well
DEP4S	28.811296	-81.265471	15	10-15	Source well
SDCMW22MA1	28.813501	-81.264419	27	25-27	Downgradient well

Bgs

below ground surface

Table 2: Sanford Cleaners Data Summary – PFAS

Data Summary - PFAS SELECTED COMPARISON STANDARD: RSL Tapwater May 2023 THQ=0.1 FDEP Provisional Groundwater Cleanup Target Level (PGCTL) for PFOA and PFOS (sum of PFOA and PFOS should be compared to the PGCTL) = 70 ng/L

	Station ID	-	DEP2S	DEP3S	DEP4S	SDCMW22MA1	TW03S
-	Sample ID	1	DEP2S-0323	DEP3S-0323	DEP4S-0323	SDCMW22MA1- 0323	TW03S-0323
-	Matrix	1	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
-	Sample Date	1	3/16/2023 13:40	3/16/2023 16:45	3/16/2023 17:35	3/16/2023 19:50	3/16/2023 18:10
Analyte	Units	Comparison Standard					
N-EtFOSAA	ng/L		< 9.9 U	< 10 U	< 9.9 U	< 10 U	13 J,O
PFBA	ng/L		12 J,O	< 20 U	25	< 20 U	< 20 U
PFBS	ng/L	6 μg/L	11 J,O	< 8.8 U	30	< 8.9 U	< 8.8 U
PFHpA	ng/L		21	6.4 J,O	19	4.7 J,O	< 10 U
PFHxA	ng/L	9.9 μg/L	18 J,O	8.8 J,O	22 J,O	< 20 U	< 20 U
PFHxS	ng/L	$0.39~\mu g/L$	< 9.1 U	< 9.1 U	7.1 J,O	< 9.1 U	< 9.1 U
PFNA	ng/L	$0.059~\mu g/L$	9.0 J,O	< 10 U	< 9.9 U	< 10 U	< 10 U
PFOA	ng/L	$0.06~\mu g/L$	30	8.1 J,O	33	6.2 J,O	5.7 J,O
PFOS	ng/L	$0.04~\mu g/L$	42 ^	< 9.3 U	43 J,O ^	< 9.3 U	23
PFPeA	ng/L		18	17	33	< 10 U	< 10 U

DATA QUALIFIER DEFINITIONS

- O Other qualifiers have been assigned providing additional information. These explanatory qualifiers are included in the printable pdf report and in other columns in the export files.
- U The analyte was not detected at or above the reporting limit.
- J The identification of the analyte is acceptable; the reported value is an estimate.
- Denotes exceedance of Comparison Standard

Figure 1

Sanford Cleaners Well Locations Map



Attachment 1

Sampling Calibration and Field Logbook

United States Environmental Protection Agency Region 4

Laboratory Services and Applied Science Division 980 College Station Road Athens, Georgia 30605-2720



Florida Dry Cleaners

Continental Cleaners, Miami, FL Flash Cleaners, Pompano Beach, FL Sanford Cleaners, Sanford, FL

LSASD Project ID# 23-0149; 23-0150; 23-0151

Project Leader: Paula Whiting

Field Instrument Calibration Logbook

Book 1 of 1
Inclusive Dates: March 3, 2023

List of personnel:

Name/Affiliation	Initials
Paula Whiting	PHN
Don Fortson Daniel McCay onw	
73/13/23	

Instruments

Instrument Field #	LSASD ID#	рН	μS	c	NTU	DO	ORP
1	020314-04	Х	X	Х			
2	092718-02 03				Х		
3	072816-03					X	X
4		X	X	Х			
5					Х		
6	E		n ^{an} y			X	X
7		Х	X	Х			
8			19		Х		
9					131	Х	Х
10		Х	Х	Х			
11					Х		
12					JITE	Х	Х

Calibration Standards

Standard	Value	Manufacturer	Lot#	Expiration
рН	4	Fisher	215478	7/23
рН	7	Fisher	254	8/23
рН	10	Fisher	226003	1/24
Conductivity	1413 µS	Drion Cakton	2203E57	3/23
Turbidity Standard Set #	10	HACH	A2095	7/23
	20	HACH	A2109	7/23
	100	HACH	A2101	7/23
Turbidity Standard Set #	10			
	20			
	100			三月
· ·	(9			
NIST Thermometer	-	Traceable	051721-04	3/1/24
NIST Thermometer	-			
	10			
ORP - Zobell Solution		Y5.I	22F100175	6/7/27
ORP - Zobell Solution	24 /4 C		# M	

	JRP - Zobell Solution			1 1 2 1 2 11	
Notes Stor N	s: Mor Buffer Set:	0927	18-02	would not	poweror
pH 4	Manufacturer	Lot#	Expi	ration Date	
7					

LSASD ID: 23-0151

nstrument #	Parameter	Standard Value	Pre-Cal Reading	Calibration/ Verification	Post-Cal Reading	End of Day Check	Initials
1	рН	4	3.94	4.01	4.01	4.02	Df
1	рН	7	6.88	6.99	7.00	3.96	Df
1	рН	10	10.00	Slope 98.3%		10000	Df
1	Spec Cond	1413 µS	1391	1413 µS	1410	1407	A D
1	Temp	NIST: 28.0 °C		Meter: 27.8 °C		NIST: 33,5°C Meter: 32,9°C	DF
2	Turbidity	0		0,20		0.12	Ef
2	Turbidity	10		9.65		9.56	Ef
2	Turbidity	20		20.0		19.7	Of
2	Turbidity	100		99.1		99.4	Dl
3	DO	100	100.D	100	100.1	97.9	23
3	ORP@ 29.7 °C	224.5	213.5	224.5	224.6	ORP STD:219.3 Meter: 218.0	21
4	рН	4					
4	рН	7					
4	pН	10					
4	Spec Cond	1413 µS		1413 µS			
4	Temp	NIST: °C		Meter: °C		NIST: °C Meter: °C	
5	Turbidity	0				31	
5	Turbidity	10					
5	Turbidity	20					
5	Turbidity	100					
6	DO	100		100			
6	ORP@ °C					ORP STD: Meter:	
7	рН	4					
7	рН	7					
7	pН	10					
7	Spec Cond	1413 µS		1413 µS			
7	Temp	NIST: °C		Meter: °C		NIST: °C Meter: °C	
8	Turbidity	0					
8	Turbidity	10					
8	Turbidity	20					
8	Turbidity	100					
9	DO	100	= 1	100			BURN
9	ORP@ °C		Tau I			ORP STD: Meter:	

Instrument #	Parameter	Standard Value	Pre-Cal Reading	Calibration/ Verification	Post-Cal Reading	End of Day Check	Initials
1	рН	4	3.97	4.01	4.02	3.95	DF
1	рН	7	6.96	7.00	7.01	6.89	Of
1	рН	10	10.04	Slope 983%		10.03	0%
1	Spec Cond	1413 µS	1417	1413 µS	1411	1412	(D)
1	Temp	NIST: 25,9°C		Meter: 25,6 °C		NIST: 28,7 °C Meter: 28,5°C	191
2	Turbidity	0		0.10		0.26	A)
2	Turbidity	10		9.67		9,61	(1)/2
2	Turbidity	20		20.1		19,9	W.L.
2	Turbidity	100		100		99.6	W.
3	DO	100	98.5	100	100.1	100,6	CIC
3	ORP@ 24.7°C	231	234	231	230.7	ORP STD:228,4 Meter:229. 1	Of
				Sansa 168			120
4	< pH →	4					
4	pН	7					100
4	pН	10					
4	Spec Cond	1413 µS		1413 µS			
4	Temp	NIST: °C		Meter: °C		NIST: °C Meter: °C	m H
5	Turbidity	0				II, II	Tall Co.
5	Turbidity	10				в 1	THE R
5	Turbidity	20		2 1			
5	Turbidity	100					
6	DO	100		100		T y et	
6	ORP@ °C	ja ja				ORP STD: Meter:	
7	pН	4		Salar Salar Contact of Assessment Contact of	ACTOR A TIGHT IN THE ALL	THE STATE OF THE S	10 C 412 SANS TOPOLOG
7	рН	7					771 - 2
7	рН	10		3			201
7	Spec Cond	1413 µS		1413 µS		The state of the s	1500
7	Temp	NIST: °C		Meter: °C		NIST: °C Meter: °C	100
8	Turbidity	0					
8	Turbidity	10					18 L
8	Turbidity	20					Bij
8	Turbidity	100				(20) (13) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	14
9	DO	100		100	NEW STATE	Maria de la companya	5 J
9	ORP@ °C			2		ORP STD: Meter:	

Calibration	Date <u>3-15-</u>	<u>23</u> т	ime <u>/</u> /9:02	2_ En	d Check T	ime	
Instrument #	Parameter	Standard Value	Pre-Cal Reading	Calibration/ Verification	Post-Cal Reading	End of Day Check	Initials
1	рН	4	3,99	4.01	4.02	3.98	DF
1	рН	7	6.97	7.00	7.01	6.96	De
1	рН	10	10.14	Slope 98.6%	10.13	10.09	07
1	Spec Cond	1413 µS	1424	1413 µS	1417	1416	af
1	Temp	NIST: 23.5°C		Meter: 23.3°C		NIST: 25,8°C Meter: 25,5°C	Sit.
2	Turbidity	0		0.18		0.13	47
2	Turbidity	110		9.62		9.53	Of.
2	Turbidity	20		20.1		20,1	ale
2	Turbidity	100		99.2		99.7	W.F.
3	DO	100	99.2	100	100.3	100.2	Vito
3	ORP@ 24.3°C	232.3	235.3	232.3	232.1	ORP STD: 232.3 Meter: 226.4	VIF
							~
4	рН	4					
4	рН	7					
4	рН	10			Saran		MARCH S
4	Spec Cond	1413 µS		1413 µS			
4	Temp	NIST: °C		Meter: °C		NIST: °C Meter: °C	
5	Turbidity	0					P. Call
5	Turbidity	10		TO MANUFACE			
5	Turbidity	20					使用度 計畫
5	Turbidity	100					
6	DO	100		100			1019.0
6	ORP@ °C		Training 7/3			ORP STD: Meter:	48
7	рН	4					
7	рН	7		NAME OF THE PARTY			
7	рН	10					TEMPER I
7	Spec Cond	1413 µS		1413 µS			
7	Temp	NIST: °C		Meter: °C		NIST: °C Meter: °C	
8	Turbidity	0					
8	Turbidity	10					
8	Turbidity	20					
8	Turbidity	100					
9	DO	100		100			THE UP
9	ORP@ °C					ORP STD: Meter:	

Jamb 12:3 40:9°

Instrument #	Parameter	Standard Value	Pre-Cal Reading	Calibration/ Verification	Post-Cal Reading	End of Day Check	Initials
1	pН	4	4.02	4.02	4.00	4.08	AI
1	рН	7	6.95	6.98	6.98	7.01	TP
1	рН	10	10.04	Slope 98.8%		10.15	al.
1	Spec Cond	1413 µS	1423	1413 µS	1403	1425	UR
1	Temp	NIST: 29, 7°C		Meter: 29,6 °C		NIST: 22.5 °C Meter: 22.1 °C	af.
2	Turbidity	0		0,17		0.27	SP
2	Turbidity	10		9.50		9.41	W.F.
2	Turbidity	20		19.8		19.6	1 The
2	Turbidity	100		99.8		99.1	6/
3	DO	100	99.7	100	100.3	97,3	DLU
3	ORP@31.3°C	223.2	208.2	223.2	, , ,	ORP STD:233, 6 Meter: 247,2	pin
					A TOP		P
4	рН	4			THE STATE OF THE S		O CONTRACTOR
4	рН	7					
4	рН	10					
4	Spec Cond	1413 µS		1413 µS			
4	Temp	NIST: °C		Meter: °C		NIST: °C Meter: °C	
5	Turbidity	0					
5	Turbidity	10	-				
5	Turbidity	20					
5	Turbidity	100					
6	DO	100		100			
6	ORP@ °C					ORP STD: Meter:	10/17
					MAR DA		
7	pН	4			Applementation (III)		
7	рН	7			6		
7	рН	10					
7	Spec Cond	1413 µS		1413 µS			
7	Temp	NIST: °C		Meter: °C		NIST: °C Meter: °C	
8	Turbidity	0					TALL ST
8	Turbidity	10					
8	Turbidity	20				The second secon	
8	Turbidity	100				And the second second	gelde.
9	DO	100		100			
9	ORP@ °C			25.4		ORP STD: Meter:	

Notes: 3 3 23 Turbidimeter SC and not turn on. Changed the batternes and the unit still did not turn. Placed red tag on Case handk 3/17/23

United States Environmental Protection Agency Region 4

Laboratory Services and Applied Science Division Hazardous Waste Section 980 College Station Road Athens, Georgia 30605-2720



Project Name:

Sanford Cleaners

Project Location:

Sanford, Florida

Project ID Number: 23-0151

Project Leader:

Paula Whiting

Field Measurement and Groundwater Sampling Logbook

of Book

Inclusive Dates: March 16 - 16, 2023

List of personnel in logbook:

Name	Initials	Organization/Duties
Paula Whiting	AM	Project Leader, Scribe, Sampler, Logbook
Daniel McCay Atw 3/16	13	Safety Officer, Instruments, Sampler
Don Fortson	Of =	

The following field procedures will be used unless otherwise stated in the field logbooks:

SESDPROC-011-R5, Field Sampling Quality Control

SESDPROC-100-R5, Field pH Measurement

SESDPROC-101-R7, Field Specific Conductance Measurement

SESDPROC-102-R5, Field Temperature Measurement

SESDPROC-103-R4, Field Turbidity Measurement

SESDPROC-105-R4, Groundwater Level and Well Depth Measurement

SESDPROC-106-R4, Field Dissolved Oxygen Measurement

SESDPROC-113-R2, Oxidation-Reduction Potential Measurement

SESDPROC-202-R4, Management of Investigation Derived Waste

SESDPROC-205-R4, Field Equipment Cleaning and Decontamination

SESDPROC-209-R4, Packing, Marking, Labeling & Shipping of Environmental & Waste Samples

SESDPROC-301-R4, Groundwater Sampling

Notes:

Groundwater samples were not filtered.

• Groundwater samples were collected using the "tubing-in-screened-interval" method as described in SESDPROC-301-R4, Section 3.5 unless otherwise noted in this logbook.

Existing tubing used if present and in good condition, otherwise new tubing will be used.

- GPS coordinates and analyses are listed in Table 1, see page 4
- Well construction information is listed in Table 1, see page 4.
- Site map is Figure 1, see page 5.
- Sample ID is Station ID plus "-0323".

Instrument calibration information is recorded in a separate instrument calibration logbook. Record instrument # (e.g. 1, 2, 3...) from the calibration logbook below: Dates Used Conductivity/pH Turbidity DO/ORP Notes:

Table 1 – Monitoring Well Information

Station ID	Latitude	Longitude	Well Depth (ft)	Screen Length (ft)	Screen Interval (ft bgs)	Well Diameter (in)	Analyses
DEP2S	28.811089	-81.265836	15	10-15	5	0.75	PFAS
DEP3S	28.811132	-81.265466	15	10-15	5	0.75	PFAS
TW03S	28.811183	-81.265465	20	5-20	15	2	PFAS
DEP4S	28.811296	-81.265471	15	10-15	5	0.75	PFAS
SDCMW22MA1	28.813501	-81.264419	27	25-27	2	0.375	PFAS

ft bgs - Feet Below Ground Surface

Figure 1: Monitoring Well Locations



Notes: 3/16/23 See page 99 g Sampling report allowed DEP 25 to sit and recharge @ 20 minute interval 3 before checking furbidity, when turbidity dropped Below 20 NTU reconnected the meters for 5 minute readings. - Lowspeed Final NTU @ 12,7 - 1640 PM decided to sample because continuous running of pump draws down we tex and resets all the readings to initial readings.

Date: 3/16	23_s	Station ID:	EPAS		_ Sample II	DEP	25-03	323
	Members	_			Duties	20/01-	1,01-	" 1 -t
0) tort	son			<u>San</u>	morer	Instru	iment
	wiu	Tiris			_COVY	men)	Zagot	<u>VC</u>
Well Diameter	(in) _	3/4	_ Wel	l screen len	gth (ft)		5	
Well Depth (ft) _	14.72	_ Tub	ing intake (ft above botto	om)	2.5	
Water Level	(ft) _	4.0	Tota	l well volum	e = 0.1632 gal	ft * Water Col	umn	
Water Column	(ft) _	10:19	_ Purg	ge Volume			130	
	D. d.i.	1		T		urge Start Tin	_	
Time	Depth to	Cumulative Volume	pH (S.U.)	Temp (°C)	Spec Cond (μS/cm)	(mg/L)	ORP (mV)	NTU
1310	M.	0,6	6.55	267	305	0.18	-80	485
1315		1.2	6.58	26.6	354.1	0.18	-90	217
1320	_	1,8	6,59	26.6	388.5	0,17	-100	108
1326		2.5	659	26,5	4136	005	700	45,3
1330		3.0	6,58	26.5	415,3	0,13	700	27.1
1335		3,5	6.59	26.5	424,4	Oild	-100	6,34
							14	
			1.01					
Sample	10.10							
Collection Time	1340		MS/MSD?	1 1				
	0 1		1					
Analyses	Conta	niner Type	Collected	Preservation	Sample Iced?	11 Dup	licate Sample	e:
PFAS	15 n	nl vial – 2	IV	Ice + HCl	[7]	Sample	e ID	
		Au		ice · rici		9 - 11 1		
Date / Time								
					All camples n	laced on ice/	cooler checke	ed for ice/water
							9	
Environm	ental conditi	ions:	Wes Is)	15.0	4203	- 0421	7
clea	10	8-10-50	ontale	VIVA De	de			
Sample m	edia descrip	tion (odor, col	or, etc.):	2 (1		0 .	CIOU	dy i
Clear	- liqui	a, high	t brown	sitt	ricett	mal c	unsin	dy dy grusbioli
100	How.	Samo	lingw	pens	tatle			,
Theea	use w	Comments/No Samp 'ell dia and	3/411	not a	bleto	nt sou	nder s	ensor
LSASD Projec	t #23-0151	and-	Fubing	tager	her in	well	Page 6 of 13	A Clarity
Sanford Adean	23-0151		Sampling	Investigation	Final Report			20 of 41

Date: 3 16	23 s	tation ID:	DEP:	35	Sample II	DE DE	P35-	0323	
Team M	1embers				Duties			1	
	D. For	tson	Validation of		San	10 ler	Instr	imend	
F	- Wh	iting.			San	wher.	Lrabo	ab.	
W. II Di		3/4				7	5		
Well Diameter (146		Well screen len			7	_	
Well Depth (ft)		FEC	-	Tubing intake (ft above botto	om)	_ di =	2	
Water Level (fi	t) _	9,50		Total well volum	e = 0.1632 gal	/ft * Water Col	lumn	The same of the same of	
Water Column (1	ft) _	8171		Purge Volume	(gal)		1116		
	(R)	1				urge Start Tin			
Time	Depth to Water	Cumulativ Volume	e pH (S.U.)	Temp (°C)	Spec Cond (µS/cm)	DO (mg/L)	ORP (mV)	NTU	
1445	vvater	0.0	481	241	2522	1.36	38,6	410	
11150	1 (4.15)	10	1100	10	2171	1711		160	
1450	A CONTRACTOR	10	4.90	24.1	0411	1120	30.6	1011	turned
1451	-	112	4,97	402416	2433	4.02	15,4	124	pump of
1320		1.3	2.8	7100 242	2991	4806	39-2	153	-au 01545
1610		18	4.96	24.3	1890	0.67	-30	18.9	22.6
1615	_	2.0	4.88	24.5	2195	1.54	-30	84.5	@1605
11040	The last	200						-12.7	11.8
				100 11-17-9	P N. TE		P = 911	1011	
	A-19					PI PION			
1 11000						YALL DASHA			
Sample Collection Time	1645		MS/MS	D? []					
Analyses	Contai	iner Type	Collected	Preservation	Sample Iced?	II Dup	licate Sample:		
PFAS	15 m	l vial – 2	IM	Ice+HCl	IV.	Sample	e ID		
Date / Time				Ice + HCl			04	215	
Well have Environmen Sunny	OperS tal condition	nefate no ligh	addedf A bree	or treatment	All samples p	laced on ice/o	cooler checked exsultate 10 Memed	I for ice/water extracti lation	ion for
Sample med turba Sheer	ia descripti	on (odor, co	olor, etc.):	todarl	id, ch	emica	Isnlfi	ur order	
Procedure d	eviations/C	omments/N	otes:	Ipensta	Hie -P	ourged i	nell dry	within !	1st minute
Deca	we v	vella	lea 3/2	pensta finot	able to	ofitson	under.	sensor	2
LSASD Project # Sanfonds Clasing 12	23-0151 (23-0151	unat		1 Aget ling Investigation		well.	rage / 01 13	21 of 41	

17

B

	Date: 3 1	123 s	Station ID:_	TW03	S	Sample I	D: TW0	35-03	323
	Team	Members				Duties			- A
	_ D	1. Forts	in			Sam	oler, 1	1 Strum	ients
		. Whit	ing	Sente	-	Sav	ngler	Logbo	ock
	Well Diameter	r (in)	2		Well screen len	gth (ft)			DAM
	Well Depth (ft) _	9.91		Tubing intake (ft above botto	om)	7,5	55 3116 b3
	Water Level	(ft) _	5.38	-11	Total well volum	e = 0.1632 gal	/ft * Water Co	olumn	
	Water Column	n (ft)	4.53		Purge Volume				
			1			P	urge Start Ti	me 1518	Ś
	Time	Depth to Water	Cumulative Volume	pH (S.U.)	Temp (°C)	Spec Cond (µS/cm)	DO (mg/L)	ORP (mV)	NTU
wired out	1527	5,84	0.9	5.6	7 24.8	1109	0,35	-30	4444
cleanout	1550	6.37	3.5	5.6	3 247	1156	0.09	-70	1428
	1555	6.33	3.9	5.64	1 24.8	1164	0.01	-70	136
	1600	6.29	43	5.6	246	1132	0.07	-90	144
Hopped ,	1605	6,29	4,0	5,65	5 24.6	1139	0.08	-20	147
ind cleane	1625	6.14	7.1	5.62	24.6	1194	0.16	-80	361
let boro	1635 pm	6.00	7.8	5.6	3 24.6	1153	0.06	-100	174
	1655	5,84	9.1	565	246	1149	013	-105	73.2
	1715	5.85	10.1	5,64	24.5	1145	0.08	-110	44,2
	1750	5185	1212	56	3 245	1140	0:04	110	25.1
	Sample Collection Time	1810		MS/MS	D?	7.6		31 1	
	1867	5,82	13.3	5,60	3 24,4	1136	0.08	-110	1812
	Analyses	Contai		Collected	Preservation	Sample Iced?	II Dul	licate Sample	04268
	PFAS	15 m	vial-2	M	Ice + HCl	IM	Sample	e ID	04213
					Ice + HCl			3000	
Da	ate/Time								
					N				
					[4]	All samples p	laced on ice/	cooler checked	d for ice/water
	Environme	ntal conditio	ons:						
	Sunn	y, war	m, I gh	bree-	re, clea	askues	3		
	Sample me	dia descripti	on (odor, col	or, etc.):		0	C. Al.	ndan	
	liquia	dwse	lty bla	CK fin	es, chei	nical.	sufu	1 UUUIC	
	Procedure	deviations/C	omments/No	tes:	whichu	van fel	led w/	black:	silty

LSASD Project #23-0151 Sanford Ascarper 23-0151 Hurbidity 50 blowed bladings from 5 min
10 min to 20 min
Sampling Investigation Final Report
has hes tory of high turbidity

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Date: 3/16	/23 5	tation ID:	DEPH DEPH	-S HS PAW	3/16/23 Sample II	. DEC	45-0	323	
Team Me	t	ntation 1Da	7-10		Sample II Duties		1	310	
D	For	tson		_	Sam	pler, 1	nstrum	ents	
<u> </u>	wh	iting			Sam	pler,	Logboo	K_	
Well Diameter (in)		3/4		W-ll law	ath (A)		5		
Well Depth (ft)	_	14.76		Well screen len Tubing intake (m)	2.	5	
Water Level (ft)		4.73		Total well volum			lumn		
Water Column (ft)		10.03		Purge Volume	(gal)		100		
		Land I have been			Pu	ırge Start Tir	ne	5	
1 IIII P	Depth to Water	Cumulativ Volume	e pH (S.U.)	Temp (°C)	Spec Cond (µS/cm)	DO (mg/L)	ORP (mV)	NTU	
1720 -	16.	1.6	6,51	0 23.8	373,4	0.71	-60	18,3	
1725 -		2.1	6.5	7 24.4	365,4	0.08	-90	10.4	
1730		2.5	6.5	7 24.5	361.6	0.13	-90	6.11	
- Xº -		1. 1.800				1			
		g-7/89/2		PE UNE		1 - Suisi	-1/41		
. 4									
				_					
				E. 1					
Sample Collection Time	735	5	MS/MS	D? []			042	209	
Analyses	Contai	iner Type	Collected	Preservation	Sample	s If Dup	olicate Sample		
PFAS		l vial – 2	IV	Ice + HCl	Iced?	Sampl	e ID		
				Ice + HCl			A =		
Date/Time	0			14	All samples p	laced on ice/	cooler checke	d for ice/water	t
Environmenta	l condition	ons:		1.00	10 10	2,51	C-1	Check all	
Sun/ light b Sample media	VOCT descripti	Lew, Con (odor, c	www.	let we	llpurg	e for 15	street 5 min ay	Chaclealle Hercleano	nt.
liquida	byou	un sed	iment,	turbide	and ver	yclou	ely, Sligh	todar	
Procedure dev	iations/C	Comments/N	Notes:	00000	Dogg	00 1101	1010 3/	4"not able sour ason thus	top
10W 10	ww	1 per 1.	Stand	Durch	1/200	00/01	to lea	ale Thu	nde
I SASD Project #22	ua 4	as m	Bolmi	Jim We	ucap	poten	blance	ason you	Hey
LSASD Project #23 Sanford/Sloane23-0	0151	ing s of	Sampl	ling Investigation i	M holl 0	mgwe	Page 9 of 13	23 of 41	

Date: 3/16	100							
Date:	0/25	Station ID:SL	omwa	22MAI	_ Sample II	D: SDC	nW221	NA1-03
Team	Members				Duties		TIV V.V.	7710
) Forte	SIN			San	malor	Ingt	niment
5	lalhi	Duc			500	ng ke	11111	ian and
1	· WILL	ing			000	mpka	LOIDO	CR
V II DI		1375				- 1		
Well Diameter		01010		ll screen len				
Well Depth (f	_	din		28	ft above botto			
Water Level (-	NA	_ Tota	al well volum	e = 0.1632 gal	/ft * Water Col	umn	
Vater Column	(ft) _	NH	_ Pur	ge Volume	(gal)		1000	
		Î o			Pi	urge Start Tin	ie 19d0	
Time	Depth to	Cumulative	pН	Temp	Spec Cond	DO	ORP	NTU
MARE	Water	Volume	(S.U.)	(°C)	(μS/cm)	(mg/L)	(mV)	NIO
1920		0,5	1.00	24.7	1116	0,59	780	1,04
1930		1.0	7,04	24,9	1141	0.31	-220	0.93
1935	-	1,5	7.03	24.9	1146	0.14	-240	0,44
1940	_	2.0	7.03	249	1155	0.08	-240	1,30
1945		2.5	7.03	25.0	1157	0.15	-740	1.51
			1100	-3.0	1121	VII	210	110
		1						
Sample Collection	1950		MS/MSD2					
	1950		MS/MSD?	IVI				
Collection	1950	Dana) E	MS/MSD?	IVI				
Collection	1950	iner Type C	8/16/23	Preservation	Sample	s If Dupl	icate Sample:	
Collection Time		iner Type C	8/16/23		Sample Iced?	ПЪцрі	icate Sample:	
Collection Time			8/16/23	Preservation lce + HCl lce + HCl		S If Dupl		
Collection Time Analyses PFAS		iner Type C	8/16/23	Ice + HCl		ПЪцрі		
Collection Time Analyses PFAS		iner Type C	8/16/23	Ice + HCl		ПЪцрі		
Collection Time Analyses PFAS		iner Type C	8/16/23	Ice + HCl		ПЪцрі		
Collection Time Analyses PFAS		iner Type C	8/16/23	Ice + HCl Ice + HCl	Iced?	Sample	ID	for ice/water
Analyses PFAS		iner Type C	8/16/23	Ice + HCl Ice + HCl	Iced?	Sample	ooler checked	
Analyses PFAS e/Time Environment	ntal condition	iner Type C	S/16/23 Collected I	Ice + HCl Ice + HCl	Iced?	Sample	ID	
Analyses PFAS e/Time Environment EVEV	ntal condition	iner Type Colvial—2 4	COOL	Ice + HCl Ice + HCl	Iced?	Sample	ooler checked	
Analyses PFAS e/Time Environmen	ntal condition	iner Type Colvial—2 H	COOL	Ice+HCI Ice+HCI	Iced?	Sample Sample	ooler checked	
Analyses PFAS e/Time Environmen	ntal condition	iner Type Colvial—2 H	COOL	Ice+HCI Ice+HCI	Iced?	Sample Sample	ooler checked	
Analyses PFAS e/Time Environmen Ever Sample med	ntal conditional c	iner Type Coloriner Type Colorine Type Colorin	COOl r, etc.):	Ice+HCI Ice+HCI	Iced?	Sample Sample	ooler checked	
Analyses PFAS Environment Sample med Procedure of	ntal condition UNG, M dia description (Yell	ons: On (odor, color)	COOL r, etc.):	Ice + HCl Ice + HCl	All samples pl	Sample laced on ice/c	00ler checked 04206 04211 04212 04207	for ice/water
Analyses PFAS Environment Evel Sample med Class Procedure of	ntal condition UNG, M dia description (Yell	ons: On (odor, color)	COOL r, etc.):	Ice + HCl Ice + HCl	All samples pl	Sample laced on ice/c	00ler checked 04206 04211 04212 04207	for ice/water
Analyses PFAS Procedure of the procedur	ntal conditional conditional conditional conditions of the conditi	iner Type Coloriner Type Colorine Type Colorin	COOL r, etc.): 19911 s: Wells	Ice+HCI Ice+HCI [] A cl, nc stalta ounc	All samples pl	Sample Sample	00ler checked 04206 04211 04212 04207	for ice/water
Analyses PFAS e/Time Environment Clear Procedure of the procedure of th	ntal conditional conditional conditional conditions of the conditi	ons: On (odor, color)	COOL r, etc.): 19911 s: Wells	Ice+HCI Ice+HCI [] A cl, nc stalta ounc	All samples pl	Sample Sample	00ler checked 04206 04211 04212 04207	for ice/water

SanfasiASDetDie23-0151

	Members						D:		
1 eam	viembers					Duties			
							Neligi Ze		
Well Diameter	(in) _			Well scre	en length	ı (ft)			
Well Depth (fi	t) _					above botto	om)		
Water Level (umn	
Water Column ((ft) _	P		Purge Vo			ar water cor		
							ırge Start Tim	ie	
Time	Depth to Water	Cumulati Volume			emp S	pec Cond (μS cm)	DO (mg/L)	ORP (mV)	NTU
8460 III				1					
					1				
			1		UAN FI				
						7	1,	2	
				12.11		5	101	2)	
LIMILITY							101		
		-							
	100		14					THE TO	way quine
Sample Collection Time	110		MS/MS	5D? [1				
Analyses	Contai	ner Type	Collected	Preserv	ation	Samples Iced?	If Dupl	icate Sample:	
PFAS	15 ml	vial-2	Lh	/Ice+1		[]	Sample	ID	
e / Time_		9/) ()(Ice+1		samples pla		ooler checked	for instrument
	1/	1				samples pro		Joier Checked	for ice/wa
	utal aanditi				J All		and on reer et		
	atal conditio	ons:			All				
Environmen			olor, etc.):) All				
Environmen			olor, etc.):) All				
Environmen	ia descriptio	on (odor, c) All				
Environmen Sample med	ia descriptio	on (odor, c			, , , , ,				

Attachment 2

PFAS Analytical Data Sheets



Region 4 Laboratory Services and Applied Science Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 23-0151

Project: 23-0151, Sanford Cleaners - Reported by Floyd Wellborn

April 18, 2023

MEMORANDUM

SUBJECT: FINAL Analytical Report

Project: 23-0151, Sanford Cleaners

FROM: Floyd Wellborn

LSB Technical Advisor

THRU: Stacie Masters, Chief

Laboratory Services Branch

TO: Paula Whiting

Attached are the final results for the analytical groups listed below. This report shall not be reproduced except in full without approval of the Region 4 laboratory. These analyses were performed in accordance with the Laboratory Services Branch's Laboratory Operations and Quality Assurance Manual (LSB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Narrative. Chemistry data have been verified based on the LSB LOQAM specifications and have been qualified by this laboratory if the applicable quality control criteria were not met. Verification is defined in Chapter 5 of the LSB LOQAM. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are accurate within the limits of the method(s) and are representative only of the samples as received by the laboratory.

Analyses Included in this report: Method Used: Accreditations:

Semi Volatile Organics (SVOA)

PFAS ASTM D7979-19 (Water) ISO

LSASD ID: 23-0151 Sampling Investigation Final Report Page 1 of 15 E231201 SVOA FINAL 04 18 23 1329



Region 4 Laboratory Services and Applied Science Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 23-0151

Project: 23-0151, Sanford Cleaners - Reported by Floyd Wellborn

Sample Disposal Policy

Due to limited space for long term sample storage, LSB's policy is to dispose of samples on a periodic schedule. Air samples collected in summa canisters will be disposed of 30 days following the issuance of this report. All other sample media including original samples, sample extracts and or digestates will be disposed of, in accordance with applicable regulations, 60 days from the date of this report.

This sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time. If samples require storage beyond the 60-day period, please contact the Sample Control Coordinator by e-mail at R4SampleCustody@epa.gov.

cc: Nardina Turner



Region 4 Laboratory Services and Applied Science Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 23-0151

Project: 23-0151, Sanford Cleaners - Reported by Floyd Wellborn

SAMPLES INCLUDED IN THIS REPORT

Project: 23-0151, Sanford Cleaners

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
TB010323	E231201-01	Trip Blank - Water	3/16/23 18:10	3/20/23 8:30
DEP2S-0323	E231201-02	Groundwater	3/16/23 13:40	3/20/23 8:30
DEP3S-0323	E231201-03	Groundwater	3/16/23 16:45	3/20/23 8:30
DEP4S-0323	E231201-04	Groundwater	3/16/23 17:35	3/20/23 8:30
SDCMW22MA1-0323	E231201-05	Groundwater	3/16/23 19:50	3/20/23 8:30
TW03S-0323	E231201-06	Groundwater	3/16/23 18:10	3/20/23 8:30



Region 4 Laboratory Services and Applied Science Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 23-0151

Project: 23-0151, Sanford Cleaners - Reported by Floyd Wellborn

DATA QUALIFIER DEFINITIONS

U	The analyte was not of	detected at or above	the reporting limit.
0			

- J The identification of the analyte is acceptable; the reported value is an estimate.
- O-2 Result greater than MDL but less than MRL.
- OC-7 The relative intensities and/or ratios of the characteristic ions do not agree with the relative intensities/ratios of the ions in the reference spectrum

ACRONYMS AND ABBREVIATIONS

Chemical Abstracts Service **CAS**

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.

- **MDL** Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
- Minimum Reporting Limit Analyte concentration that corresponds to the lowest demonstrated level of acceptable **MRL** quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
- TIC Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

ACCREDITATIONS:

ISO Accredited to ISO/IEC 17025:2017 and accreditation requirements for Forensic Science Testing Laboratories.

> Refer to the certificate and scope of accreditation FT-0330 at: http://www.epa.gov/aboutepa/about-region-4s-science-and-ecosystem-support-division-sesd

NR Not accredited for this test.

DW Accredited for conformance with ISO/IEC 17025:2017 and testing elements in the Fifth Edition of the Manual for the Certification of Laboratories Analyzing Drinking Water, EPA 815-R-05-004, 2005.

> Refer to the certificate and scope of accreditation AT-2628 at: http://www.epa.gov/aboutepa/about-region-4s-science-and-ecosystem-support-division-sesd

ISO/DW Accredited to ISO/IEC 17025:2017 and accreditation requirements for Forensic Science Testing Labs, and conformance with ISO/IEC 17025:2017 and testing elements in the Manual for the Certification of Laboratories Analyzing Drinking Water.

Sampling Investigation Final Report E231201 SVOA FINAL 04 18 23 1329



Region 4 Laboratory Services and Applied Science Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 23-0151

Project: 23-0151, Sanford Cleaners - Reported by Floyd Wellborn

Semi Volatile Organics

Project: 23-0151, Sanford Cleaners

Lab ID: E231201-01 Sample ID: <u>TB010323</u> **Station ID:** Matrix: Trip Blank - Water

Date Collected: 3/16/23 18:10

CAS	ecteu: 3/10/23 18:10							
Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
757124-72-4	4:2FTS	9.4	U	ng/L	9.4	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
27619-97-2	6:2FTS	9.5	U	ng/L	9.5	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
39108-34-4	8:2FTS	9.6	U	ng/L	9.6	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
754-91-6	FOSA	10	U	ng/L	10	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
13252-13-6	HFPO-DA	20	U	ng/L	20	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
2991-50-6	N-EtFOSAA	10	U	ng/L	10	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
2355-31-9	N-MeFOSAA	10	U	ng/L	10	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
375-22-4	PFBA	20	U	ng/L	20	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
375-73-5	PFBS	8.9	U	ng/L	8.9	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
335-76-2	PFDA	10	U	ng/L	10	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
307-55-1	PFDoA	10	U	ng/L	10	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
335-77-3	PFDS	9.7	U	ng/L	9.7	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
375-85-9	PFHpA	10	U	ng/L	10	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
375-92-8	PFHpS	19	U	ng/L	19	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
307-24-4	PFHxA	20	U	ng/L	20	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
355-46-4	PFHxS	9.1	U	ng/L	9.1	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
375-95-1	PFNA	10	U	ng/L	10	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
68259-12-1	PFNS	9.6	U	ng/L	9.6	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
335-67-1	PFOA	10	U	ng/L	10	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
1763-23-1	PFOS	9.3	U	ng/L	9.3	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
2706-90-3	PFPeA	10	U	ng/L	10	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
2706-91-4	PFPeS	9.4	U	ng/L	9.4	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
376-06-7	PFTeDA	20	U	ng/L	20	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
72629-94-8	PFTrDA	10	U	ng/L	10	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19
2058-94-8	PFUdA	10	U	ng/L	10	3/28/23 14:53	4/06/23 16:43	ASTM D7979-19



Region 4 Laboratory Services and Applied Science Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 23-0151

Project: 23-0151, Sanford Cleaners - Reported by Floyd Wellborn

Semi Volatile Organics

Project: 23-0151, Sanford Cleaners

Lab ID: E231201-02 Sample ID: <u>DEP2S-0323</u> Station ID: <u>DEP2S</u> Matrix: Groundwater

Date Collected: 3/16/23 13:40

CAS	cted: 3/16/23 13:40						
Number	Analyte	Results Qualifiers	Units	MRL	Prepared	Analyzed	Method
757124-72-4	4:2FTS	9.3 U	ng/L	9.3	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
27619-97-2	6:2FTS	9.4 U	ng/L	9.4	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
39108-34-4	8:2FTS	9.5 U	ng/L	9.5	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
754-91-6	FOSA	9.9 U	ng/L	9.9	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
13252-13-6	HFPO-DA	20 U	ng/L	20	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
2991-50-6	N-EtFOSAA	9.9 U	ng/L	9.9	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
2355-31-9	N-MeFOSAA	9.9 U	ng/L	9.9	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
375-22-4	PFBA	12 J, Q-2	ng/L	20	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
375-73-5	PFBS	11 J, QC-7	ng/L	8.8	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
335-76-2	PFDA	9.9 U	ng/L	9.9	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
307-55-1	PFDoA	9.9 U	ng/L	9.9	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
335-77-3	PFDS	9.6 U	ng/L	9.6	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
375-85-9	PFHpA	21	ng/L	9.9	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
375-92-8	PFHpS	19 U	ng/L	19	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
307-24-4	PFHxA	18 J, Q-2, QC-7	ng/L	20	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
355-46-4	PFHxS	9.1 U	ng/L	9.1	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
375-95-1	PFNA	9.0 J, Q-2	ng/L	9.9	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
68259-12-1	PFNS	9.5 U	ng/L	9.5	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
335-67-1	PFOA	30	ng/L	9.9	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
1763-23-1	PFOS	42	ng/L	9.2	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
2706-90-3	PFPeA	18	ng/L	9.9	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
2706-91-4	PFPeS	9.3 U	ng/L	9.3	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
376-06-7	PFTeDA	20 U	ng/L	20	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
72629-94-8	PFTrDA	9.9 U	ng/L	9.9	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19
2058-94-8	PFUdA	9.9 U	ng/L	9.9	4/05/23 15:18	4/06/23 17:02	ASTM D7979-19



Region 4 Laboratory Services and Applied Science Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 23-0151

Project: 23-0151, Sanford Cleaners - Reported by Floyd Wellborn

Semi Volatile Organics

Project: 23-0151, Sanford Cleaners

Lab ID: E231201-03 Sample ID: <u>DEP3S-0323</u> Station ID: <u>DEP3S</u> Matrix: Groundwater

Date Collected: 3/16/23 16:45

CAS								
Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
757124-72-4	4:2FTS	9.3	U	ng/L	9.3	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
27619-97-2	6:2FTS	9.5	U	ng/L	9.5	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
39108-34-4	8:2FTS	9.6	U	ng/L	9.6	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
754-91-6	FOSA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
13252-13-6	HFPO-DA	20	U	ng/L	20	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
2991-50-6	N-EtFOSAA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
2355-31-9	N-MeFOSAA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
375-22-4	PFBA	20	U	ng/L	20	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
375-73-5	PFBS	8.8	U	ng/L	8.8	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
335-76-2	PFDA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
307-55-1	PFDoA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
335-77-3	PFDS	9.6	U	ng/L	9.6	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
375-85-9	PFHpA	6.4	J, Q-2, QC-7	ng/L	10	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
375-92-8	PFHpS	19	U	ng/L	19	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
307-24-4	PFHxA	8.8	J, Q-2, QC-7	ng/L	20	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
355-46-4	PFHxS	9.1	U	ng/L	9.1	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
375-95-1	PFNA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
68259-12-1	PFNS	9.6	U	ng/L	9.6	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
335-67-1	PFOA	8.1	J, Q-2, QC-7	ng/L	10	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
1763-23-1	PFOS	9.3	U	ng/L	9.3	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
2706-90-3	PFPeA	17		ng/L	10	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
2706-91-4	PFPeS	9.4	U	ng/L	9.4	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
376-06-7	PFTeDA	20	U	ng/L	20	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
72629-94-8	PFTrDA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19
2058-94-8	PFUdA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:21	ASTM D7979-19



Region 4 Laboratory Services and Applied Science Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 23-0151

Project: 23-0151, Sanford Cleaners - Reported by Floyd Wellborn

Semi Volatile Organics

Project: 23-0151, Sanford Cleaners

Lab ID: E231201-04 Sample ID: <u>DEP4S-0323</u> Station ID: <u>DEP4S</u> Matrix: Groundwater

Date Collected: 3/16/23 17:35

CAS	ecteu: 3/10/23 17:33						
Number	Analyte	Results	Qualifiers Unit	rs MRL	Prepared	Analyzed	Method
757124-72-4	4:2FTS	9.3 t	J ng/	L 9.3	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
27619-97-2	6:2FTS	9.4 U	J ng/	L 9.4	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
39108-34-4	8:2FTS	9.5 U	J ng/	L 9.5	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
754-91-6	FOSA	9.9 t	J ng/	L 9.9	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
13252-13-6	HFPO-DA	20 U	J ng/	L 20	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
2991-50-6	N-EtFOSAA	9.9 t	J ng/	L 9.9	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
2355-31-9	N-MeFOSAA	9.9 U	J ng/	L 9.9	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
375-22-4	PFBA	25	ng/	L 20	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
375-73-5	PFBS	30	ng/	L 8.8	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
335-76-2	PFDA	9.9 t	J ng/	L 9.9	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
307-55-1	PFDoA	9.9 U	J ng/	L 9.9	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
335-77-3	PFDS	9.6 U	J ng/	L 9.6	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
375-85-9	PFHpA	19	ng/	L 9.9	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
375-92-8	PFHpS	19 U	J ng/	L 19	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
307-24-4	PFHxA	22 J	, QC-7 ng/	L 20	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
355-46-4	PFHxS	7.1 J	ng/	L 9.0	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
375-95-1	PFNA	9.9 U	J ng/	L 9.9	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
68259-12-1	PFNS	9.5 U	J ng/	L 9.5	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
335-67-1	PFOA	33	ng/	L 9.9	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
1763-23-1	PFOS	43 J	, QC-7 ng/	L 9.2	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
2706-90-3	PFPeA	33	ng/	L 9.9	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
2706-91-4	PFPeS	9.3 U	J ng/	L 9.3	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
376-06-7	PFTeDA	20 U	J ng/	L 20	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
72629-94-8	PFTrDA	9.9 t	J ng/	L 9.9	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19
2058-94-8	PFUdA	9.9 <mark>t</mark>	J ng/	L 9.9	4/05/23 15:18	4/06/23 17:39	ASTM D7979-19



Region 4 Laboratory Services and Applied Science Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 23-0151

Project: 23-0151, Sanford Cleaners - Reported by Floyd Wellborn

Semi Volatile Organics

Project: 23-0151, Sanford Cleaners

Sample ID: <u>SDCMW22MA1-0323</u> Lab ID: <u>E231201-05</u>
Station ID: <u>SDCMW22MA1</u> Matrix: Groundwater

Date Collected: 3/16/23 19:50

CAS								
Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
757124-72-4	4:2FTS	9.4	U	ng/L	9.4	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
27619-97-2	6:2FTS	9.5	U	ng/L	9.5	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
39108-34-4	8:2FTS	9.6	U	ng/L	9.6	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
754-91-6	FOSA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
13252-13-6	HFPO-DA	20	U	ng/L	20	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
2991-50-6	N-EtFOSAA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
2355-31-9	N-MeFOSAA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
375-22-4	PFBA	20	U	ng/L	20	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
375-73-5	PFBS	8.9	U	ng/L	8.9	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
335-76-2	PFDA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
307-55-1	PFDoA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
335-77-3	PFDS	9.7	U	ng/L	9.7	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
375-85-9	PFHpA	4.7	J, Q-2, QC-7	ng/L	10	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
375-92-8	PFHpS	19	U	ng/L	19	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
307-24-4	PFHxA	20	U	ng/L	20	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
355-46-4	PFHxS	9.1	U	ng/L	9.1	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
375-95-1	PFNA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
68259-12-1	PFNS	9.6	U	ng/L	9.6	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
335-67-1	PFOA	6.2	J, Q-2, QC-7	ng/L	10	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
1763-23-1	PFOS	9.3	U	ng/L	9.3	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
2706-90-3	PFPeA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
2706-91-4	PFPeS	9.4	U	ng/L	9.4	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
376-06-7	PFTeDA	20	U	ng/L	20	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
72629-94-8	PFTrDA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19
2058-94-8	PFUdA	10	U	ng/L	10	4/05/23 15:18	4/06/23 17:58	ASTM D7979-19



Region 4 Laboratory Services and Applied Science Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 23-0151

Project: 23-0151, Sanford Cleaners - Reported by Floyd Wellborn

Semi Volatile Organics

Project: 23-0151, Sanford Cleaners

Sample ID: TW03S-0323 Lab ID: E231201-06
Station ID: TW03S Matrix: Groundwater

Date Collected: 3/16/23 18:10

CAS								
Number	Analyte	Results	Qualifiers	Units	MRL	Prepared	Analyzed	Method
757124-72-4	4:2FTS	9.4	U	ng/L	9.4	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
27619-97-2	6:2FTS	9.5	U	ng/L	9.5	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
39108-34-4	8:2FTS	9.6	U	ng/L	9.6	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
754-91-6	FOSA	10	U	ng/L	10	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
13252-13-6	HFPO-DA	20	U	ng/L	20	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
2991-50-6	N-EtFOSAA	13	J, QC-7	ng/L	10	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
2355-31-9	N-MeFOSAA	10	U	ng/L	10	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
375-22-4	PFBA	20	U	ng/L	20	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
375-73-5	PFBS	8.8	U	ng/L	8.8	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
335-76-2	PFDA	10	U	ng/L	10	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
307-55-1	PFDoA	10	U	ng/L	10	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
335-77-3	PFDS	9.6	U	ng/L	9.6	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
375-85-9	PFHpA	10	U	ng/L	10	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
375-92-8	PFHpS	19	U	ng/L	19	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
307-24-4	PFHxA	20	U	ng/L	20	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
355-46-4	PFHxS	9.1	U	ng/L	9.1	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
375-95-1	PFNA	10	U	ng/L	10	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
68259-12-1	PFNS	9.6	U	ng/L	9.6	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
335-67-1	PFOA	5.7	J, Q-2, QC-7	ng/L	10	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
1763-23-1	PFOS	23		ng/L	9.3	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
2706-90-3	PFPeA	10	U	ng/L	10	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
2706-91-4	PFPeS	9.4	U	ng/L	9.4	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
376-06-7	PFTeDA	20	U	ng/L	20	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
72629-94-8	PFTrDA	10	U	ng/L	10	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19
2058-94-8	PFUdA	10	U	ng/L	10	4/05/23 15:18	4/06/23 18:17	ASTM D7979-19

LSASD ID: 23-0151 Sampling Investigation Final Report Page 10 of 15 E231201 SVOA FINAL 04 18 23 1329



Region 4 Laboratory Services and Applied Science Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 23-0151

Project: 23-0151, Sanford Cleaners - Reported by Floyd Wellborn

Semi Volatile Organics (SVOA) - Quality Control **US-EPA, Region 4, LSASD**

Spike

Source

%REC

RPD

Reporting

Amalasta	D1	Reporting	T In:	Spike	Domlt	0/DEC	%KEC	מממ	KPD Limit	No.
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 2304003 - S PFC										
Blank (2304003-BLK1)				Prepared: (04/05/23 A1	nalyzed: 04	1/06/23			
ASTM D7979-19										
4:2FTS	U	9.4	ng/L							U
5:2FTS	U	9.5	"							U
3:2FTS	U	9.6	"							U
FOSA	U	10	"							U
HFPO-DA	U	20	"							U
N-EtFOSAA	U	10	"							U
N-MeFOSAA	U	10	"							U
PFBA	U	20	"							U
PFBS	U	8.8	"							U
PFDA	U	10	"							U
PFDoA	U	10	"							U
PFDS	U	9.6	"							U
PFHpA	U	10	"							U
PFHpS	U	19	"							U
PFHxA	U	20	"							U
PFHxS	U	9.1	"							U
PFNA	U	10	"							U
PFNS	U	9.6	"							U
PFOA	U	10	"							U
PFOS	U	9.3	"							U
PFPeA	U	10	"							τ
PFPeS	U	9.4	"							U
PFTeDA	U	20	"							τ
PFTrDA	U	10	"							U
PFUdA	U	10	"							U
LCS (2304003-BS1)				Prepared: (04/05/23 A1	nalyzed: 04	4/06/23			
ASTM D7979-19	460	0.4	na/I	274.00		125	67 1 125			
4:2FTS	469	9.4	ng/L	374.00		125	67.1-125			
6:2FTS	447	9.5	"	380.00		118	49.2-134			OT -
8:2FTS	561	9.6		384.00		146	56.4-136			QL-2
FOSA	391	10		400.00		97.8	57.7-148			
HFPO-DA	393	20	"	400.00		98.2	51.1-127			
N-EtFOSAA	553	10	"	400.00		138	47.2-185.3			
N-MeFOSAA	459	10	"	400.00		115	43.2-178			
PFBA	424	20	"	400.00		106	67.9-118			
PFBS	374	8.8	"	354.00		106	68.2-118			
PFDA	455	10	"	400.00		114	47.4-162			
PFDoA	434	10	"	400.00		108	56.5-155			



Region 4 Laboratory Services and Applied Science Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 23-0151

Project: 23-0151, Sanford Cleaners - Reported by Floyd Wellborn

Semi Volatile Organics (SVOA) - Quality Control **US-EPA, Region 4, LSASD**

Prepart 100	Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
PFDS	Batch 2304003 - S PFC											
PEHpA 426 10	LCS (2304003-BS1)				Prepared: (04/05/23 A	nalyzed: 04	1/06/23				
PFIIDS	PFDS	419	9.6	ng/L	386.00		108	35.1-168				
PEHAS	PFHpA	426	10	"	400.00		107	72.8-116				
PEHSS 407 9.1 ° 364.80 112 69.5-117 PENA 448 10 ° 400.00 112 64.1-128.4 PENA 448 10 ° 400.00 113 64.1-128.4 PEOA 431 10 ° 400.00 108 667-122 PEOS 406 9.3 ° 370.20 110 70.4-122 PEPOS 406 9.3 ° 370.20 110 70.4-122 PEPOS 406 9.3 ° 370.20 110 70.4-122 PEPOS 406 9.3 ° 400.00 116 429.179 PEPEA 423 10 ° 400.00 116 429.179 PEPEA 463 20 ° 400.00 116 429.179 PETEDA 463 10 ° 400.00 116 429.179 PETEDA 448 10 ° 400.00 116 63.142 Matrix Spike (2304003-MIS1) Source: E231202-07RE1 Prepared: 64.05/23 Analyzed: 64.3-142 Matrix Spike (2304003-MIS1) Source: E231202-07RE1 Prepared: 64.05/23 Analyzed: 64.06/23 ASTIM D7979-19 422FIS 917 9.4 ng/L 375.50 U 244 70.133 QN 622FIS 450 9.5 ° 3815.3 U 118 58-143 C22FIS 450 9.5 ° 3815.3 U 118 58-143 PEDA 415 10 ° 401.61 U 103 66-126 PEDA 489 10 ° 401.61 U 103 66-126 PEDA 489 10 ° 401.61 U 135 50-168 N-MeFOSAA 489 10 ° 401.61 U 135 50-168 N-MeFOSAA 489 10 ° 401.61 U 119 53-156 PEDA 479 10 ° 401.61 U 119 53-156 PEDA 400 10 ° 401.61 U 119 53-156 PEDA 400 10 ° 401.61 U 119 53-156 PEDA 400 10 ° 401.61 U 119 53-156 PEPDA 400 10 °	PFHpS	420	19	"	380.00		110	59.7-130				
PENA 448 10 ° 400.00 112 641-128.4 PENS 396 9.6 ° 384.00 103 633-126 PENS 406 9.3 ° 370.00 103 633-126 PENS 406 9.3 ° 370.00 100 70.4-122 PENS 406 9.3 ° 370.00 106 72-115 PENS 392 9.4 ° 370.00 106 72-115 PENS 403 20 ° 400.00 106 72-115 PENS 403 20 ° 400.00 106 72-115 PENS 403 20 ° 400.00 106 72-115 PETLDA 421 10 ° 400.00 105 32-2-15 PENDA 448 10 ° 400.00 105 32-2-15 PENDA 458 10 ° 400.00 105 32-2-15 PENDA 459 10 ° 400.00 105 32-2-15 PENDA 459 10 ° 400.00 105 32-2-15 PENDA 415 10 ° 400.00 10 10 10 10 10 10 10 10 10 10 10 10 1	PFHxA	421	20	"	400.00		105	62.6-127				
PFNS	PFHxS	407	9.1	"	364.80		112	69.5-117				
PFOA 431 10 " 400.00 108 667-122 PFOS 406 9.3 " 370.20 110 70.4-122 PFPPA 423 10 " 400.00 106 72-115 PFPES 392 9.4 " 376.00 104 69-117 PFTEDA 463 20 " 400.00 116 42-9-179 PFTEDA 421 10 " 400.00 105 32.2-215 PFUMA 421 10 " 400.00 112 65.8-142 MATRIX SPIKE (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 Analyzed: 04/06/23 ASTM D7979-19 42FTS 97 9.4 ng/L 375.50 U 244 70-133 QN 62-FTS 450 9.5 " 381.53 U 118 58-143 62-FTS 520 9.6 " 385.54 U 135 66-126 QN FOSA 415 10 " 401.61 U 95.5 45-129 HEPO-DA 384 20 " 401.61 U 95.5 45-129 PFBB 433 20 " 401.61 U 95.5 45-129 PFBB 433 20 " 401.61 U 119 53-156 PFDA 479 10 " 401.61 U 119 53-156 PFDA 479 10 " 401.61 U 119 53-156 PFDA 479 10 " 401.61 U 119 53-156 PFDA 460 10 " 401.61 U 119 53-156 PFDA 479 10 " 401.61 U 119 53-156 PFDA 479 10 " 401.61 U 119 53-156 PFDA 460 10 " 401.61 U 119 53-156 PFDA 479 10 " 401.61 U 119 53-156 PFDA 479 10 " 401.61 U 119 53-156 PFDA 460 10 " 401.61 U 119 53-156 PFDA 479 10 " 401.61 U 119 53-156 PFDA 480 20 U 119 20 U 119 20 U 119 20 U 11	PFNA	448	10	"	400.00		112	64.1-128.4				
PFOS 406 9.3 * 370.20 110 70.4-122 PFPEA 423 10 * 400.00 106 72-115 PFPEA 392 9.4 * 375.60 104 69-117 PFTEDA 463 20 * 400.00 116 42.9-179 PFTDA 421 10 * 400.00 105 32.2-215 PFUDA 448 10 * 400.00 115 42.9-179 Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 Analyzed: 04/06/23 Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 Analyzed: 04/06/23 Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 Analyzed: 04/06/23 Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 Analyzed: 04/06/23 Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 Analyzed: 04/06/23 Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/06/23	PFNS	396	9.6	"	384.00		103	63.3-126				
PFPeA 423 10 " 400.00 106 72-115 PFPES 392 9.4 " 376.00 104 69-117 PFTEDA 463 20 " 400.00 116 429-179 PFTEDA 421 10 " 400.00 105 322-215 PFUA 448 10 " 400.00 105 322-215 Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 Analyzed: 04/06/23 Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 Analyzed: 04/06/23 Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 Analyzed: 04/06/23 Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 Analyzed: 04/06/23 Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 Analyzed: 04/06/23 Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 <th colsp<="" td=""><td>PFOA</td><td>431</td><td>10</td><td>"</td><td>400.00</td><td></td><td>108</td><td>66.7-122</td><td></td><td></td><td></td></th>	<td>PFOA</td> <td>431</td> <td>10</td> <td>"</td> <td>400.00</td> <td></td> <td>108</td> <td>66.7-122</td> <td></td> <td></td> <td></td>	PFOA	431	10	"	400.00		108	66.7-122			
PFPES 392 9.4 " 376.00 104 69-117 PFTEDA 463 20 " 400.00 116 429-179 PFTDA 421 10 " 400.00 105 32-215 PFUJA FPTUA As TM 07079-19 *** Source: E231202-07RE1** Prepared: 04/05/23** Analyzed: 04/06/23** *** As TM 07979-19 *** As TM 07979-19 *** As TM 07979-19 *** Source: E231202-07RE1** Prepared: 04/05/23** Analyzed: 04/06/23** *** As TM 07979-19 *** 422FS 9.4 n.gl. 375.50 U 244 70-133 QN *** 422FS 9.5 n.gl. 385.54 U 113 56-126 QN *** 450 9.5 " 381.53 U 112 47-169	PFOS	406	9.3	"	370.20		110	70.4-122				
PFEDA 463 20 " 400.00 116 42.9-179 PFEDA 421 10 " 400.00 105 32.2-215 Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 Analyzed: 04/06/23 ASTM D7979-19 42ETTS 917 9.4 ng/L 375.50 U 244 70-133 Qv 62ETS 450 9.5 " 381.53 U 135 66-126 Qv 82ETTS 520 9.6 " 385.54 U 103 61-138 0v FOSA 415 10 " 401.61 U 95.5 45-129 0v N-BEFOSAA 433 20 " 401.61 U 133 60-126 Qv PEBA 433 20 " 401.61 U 122 47-169 0v 140-161 U 122 47-169 140-169 140-161 U 122 47-169 140-169 140-161 U 112 47-169 140-169 140-161 U 112 47-169 140-169 <td>PFPeA</td> <td>423</td> <td>10</td> <td>"</td> <td>400.00</td> <td></td> <td>106</td> <td>72-115</td> <td></td> <td></td> <td></td>	PFPeA	423	10	"	400.00		106	72-115				
PFIDA 421 10 " 400.00 105 32.2-215 PFUDA 448 10 " 400.00 112 65.8-142 Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 Analyzed: 04/06/23 ASTIM D7979-19 4-2ETS 917 9.4 ng/L 375.50 U 244 70.133 QV 6.2ETS 450 9.5 " 381.53 U 118 58-143 8-2ETS 520 9.6 " 385.54 U 135 66-126 PSOA 415 10 " 401.61 U 95.5 45-129 N-EIFOSAA 537 10 " 401.61 U 95.5 45-129 N-EIFOSAA 489 10 " 401.61 U 122 47-169 PFBA 433 20 " 401.61 U 122 47-169 PFBA 433 8.9 " 355.42 30.6 113 62-135 PFDA 479 10 " 401.61 U 115 30-172 PFBDS 447 9.7 " 387.55 U 115 30-172 PFDB 447 10 " 401.61 U 115 30-172 PFDB 447 10 " 401.61 U 115 30-172 PFBBS 437 437 9.7 " 388.53 U 116 66-132 PFDA 447 10 " 401.61 U 115 30-172 PFBBS 497 9.7 " 387.55 U 111 66-132 PFHAA 480 20 " 401.61 19.1 115 64-138 PFBHAS 480 20 " 401.61 19.1 115 64-138 PFBHAS 499 10 " 401.61 19.1 115 64-138 PFBHAS 499 10 " 401.61 19.1 115 64-138 PFBNS 394 9.6 " 385.54 U 102 102 61-126 PFDA 465 10 " 401.61 19.3 111 74-127 PFPS 473 9.3 " 371.69 55.7 112 68-132 PFPCS 474 9.9 " 401.61 19.3 111 74-127 PFCS 475 9.9 " 401.61 19.3 111 74-127 PFCS 473 9.3 " 371.69 55.7 112 68-132	PFPeS	392	9.4	"	376.00		104	69-117				
Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 Analyzed: 04/06/23	PFTeDA	463	20	"	400.00		116	42.9-179				
Matrix Spike (2304003-MS1) Source: E231202-07RE1 Prepared: 04/05/23 ASTM D7979-19 42FTS 917 9.4 ng/L 375.50 U 244 70-133 QN 62FTS \$50 9.5 " 388.54 U 118 58-143 82FTS 520 9,6 " 388.54 U 113 66-126 QN FOSA 415 10 " 401.61 U 134 50-168 N-EIFOSAA 384 20 " 401.61 U 135 60-146 N-EIFOSAA 489 10 " 401.61 U 12 47-169 PFBA 433 20 " 401.61 U 115 10 118 50-168 N-EIFOSAA 433 8.9 " 401.61 U 115 10 10 115 10 10 10 115 10 10	PFTrDA	421	10	"	400.00		105	32.2-215				
ASTM D7979-19 4:2FTS 917 9.4 ng/L 375.50 U 244 70-133 QN 6:2FTS 450 9.5 " 381.53 U 118 58-143 ES:2FTS 520 9.6 " 385.54 U 135 66-126 QN FOSA 415 10 " 401.61 U 103 61-138 EFPO-DA 384 20 " 401.61 U 103 61-138 EFPO-DA 384 20 " 401.61 U 134 50-168 EFPO-SAA 537 10 " 401.61 U 122 47-169 EFBA 433 20 " 401.61 U 122 47-169 EFBA 433 20 " 401.61 U 122 47-169 EFBA 433 8.9 " 355.42 30.6 113 62-135 EFPDA 479 10 " 401.61 U 119 53-156 EFPDA 460 10 " 401.61 U 119 53-156 EFPDA 460 10 " 401.61 U 119 53-156 EFPDA 447 10 " 401.61 U 115 30-172 EFPDS 407 9.7 " 387.55 U 105 44-151 EFFHPA 447 10 " 401.61 U 115 66-132 EFFHS 397 9.1 " 366.26 U 108 72-124 EFFHS 397 9.1 " 366.26 U 108 72-124 EFFNS 397 9.1 " 366.26 U 108 72-124 EFFNS 394 9.6 " 385.54 U 102 61-126 EFFOA 465 10 " 401.61 19.3 111 72-129 EFPOS 473 9.3 " 371.69 55.7 112 68-132 EFFPA 465 10 " 401.61 27.3 109 75-122 EFFPA 4665 10 " 401.61 27.3 109 75-122	PFUdA	448	10	"	400.00		112	65.8-142				
ASTM D7979-19 4:2FTS 917 9.4 ng/L 375.50 U 244 70-133 QN 6:2FTS 450 9.5 " 381.53 U 118 58-143 ES:2FTS 520 9.6 " 385.54 U 135 66-126 QN FOSA 415 10 " 401.61 U 103 61-138 EFPO-DA 384 20 " 401.61 U 103 61-138 EFPO-DA 384 20 " 401.61 U 134 50-168 EFPO-SAA 537 10 " 401.61 U 122 47-169 EFBA 433 20 " 401.61 U 122 47-169 EFBA 433 20 " 401.61 U 122 47-169 EFBA 433 8.9 " 355.42 30.6 113 62-135 EFPDA 479 10 " 401.61 U 119 53-156 EFPDA 460 10 " 401.61 U 119 53-156 EFPDA 460 10 " 401.61 U 119 53-156 EFPDA 447 10 " 401.61 U 115 30-172 EFPDS 407 9.7 " 387.55 U 105 44-151 EFFHPA 447 10 " 401.61 U 115 66-132 EFFHS 397 9.1 " 366.26 U 108 72-124 EFFHS 397 9.1 " 366.26 U 108 72-124 EFFNS 397 9.1 " 366.26 U 108 72-124 EFFNS 394 9.6 " 385.54 U 102 61-126 EFFOA 465 10 " 401.61 19.3 111 72-129 EFPOS 473 9.3 " 371.69 55.7 112 68-132 EFFPA 465 10 " 401.61 27.3 109 75-122 EFFPA 4665 10 " 401.61 27.3 109 75-122												
ASTM D7979-19 4:2FTS 917 9.4 ng/L 375.50 U 244 70-133 QN 6:2FTS 450 9.5 " 381.53 U 118 58-143 ES:2FTS 520 9.6 " 385.54 U 135 66-126 QN FOSA 415 10 " 401.61 U 103 61-138 EFPO-DA 384 20 " 401.61 U 103 61-138 EFPO-DA 384 20 " 401.61 U 134 50-168 EFPO-SAA 537 10 " 401.61 U 122 47-169 EFBA 433 20 " 401.61 U 122 47-169 EFBA 433 20 " 401.61 U 122 47-169 EFBA 433 8.9 " 355.42 30.6 113 62-135 EFPDA 479 10 " 401.61 U 119 53-156 EFPDA 460 10 " 401.61 U 119 53-156 EFPDA 460 10 " 401.61 U 119 53-156 EFPDA 447 10 " 401.61 U 115 30-172 EFPDS 407 9.7 " 387.55 U 105 44-151 EFFHPA 447 10 " 401.61 U 115 66-132 EFFHS 397 9.1 " 366.26 U 108 72-124 EFFHS 397 9.1 " 366.26 U 108 72-124 EFFNS 397 9.1 " 366.26 U 108 72-124 EFFNS 394 9.6 " 385.54 U 102 61-126 EFFOA 465 10 " 401.61 19.3 111 72-129 EFPOS 473 9.3 " 371.69 55.7 112 68-132 EFFPA 465 10 " 401.61 27.3 109 75-122 EFFPA 4665 10 " 401.61 27.3 109 75-122	Matrix Snike (2304003-MS1)	Sou	rce: E231202-	07RE1	Prepared: (04/05/23 A	nalvzed: 04	1/06/23				
422FTS 917 9.4 ng/L 375.50 U 244 70-133 QN 622FTS 450 9.5 " 381.53 U 118 58-143 QN 622FTS 520 9.6 " 385.54 U 135 66-126 QN FOSA 415 10 " 401.61 U 103 61-138 HEPO-DA 384 20 " 401.61 U 95.5 45-129 N-EIFOSAA 537 10 " 401.61 U 122 47-169 PFBA 433 8.9 " 401.61 U 115 50-168 N-MeFOSAA 489 10 " 401.61 U 115 50-168 N-MeFOSAA 480 10 " 401.61 U 115 50-168 N-MeFOSAA 460 N-MeFOSAA 460 10 " 401.61 U 115 50-168 N-MeFOSAA 460 N-MEFOSAA 4		200		0,1121								
6:2FTS	4:2FTS	917	9.4	ng/L	375.50	U	244	70-133			QM-2	
822FTS 520 9.6 " 385.54 U 135 66-126 QN FOSA 415 10 " 401.61 U 103 61-138 HFPO-DA 384 20 " 401.61 U 95.5 45-129 N-EIFOSAA 537 10 " 401.61 U 122 47-169 N-MEPOSAA 489 10 " 401.61 U 122 47-169 PFBA 433 20 " 401.61 15.5 104 60-141 PFBS 433 8.9 " 355.42 30.6 113 62-135 PFDA 479 10 " 401.61 U 119 53-156 PFDA 407 9.7 " 387.55 U 105 44-151 PFHpA 447 10 " 401.61 U 115 30-172 PFHpA 447 10 " 401.61 13.8 108 75-122 PFHpA 447 10 " 401.61 19.1 115 64-138 PFHxS 397 9.1 " 366.26 U 108 72-124 PFNS 394 9.6 " 385.54	6:2FTS	450										
HFPO-DA 384 20 " 401.61 U 95.5 45-129 N-EIFOSAA 537 10 " 401.61 U 134 50-168 N-MeFOSAA 489 10 " 401.61 U 122 47-169 PFBA 433 20 " 401.61 U 122 47-169 PFBS 433 8.9 " 355.42 30.6 113 62-135 PFDA 479 10 " 401.61 U 119 53-156 PFDOA 460 10 " 401.61 U 115 30-172 PFBS 407 9.7 " 387.55 U 105 44-151 PFHpA 447 10 " 401.61 13.8 108 75-122 PFHpS 422 19 " 381.53 U 111 66-132 PFHxA 480 20 " 401.61 19.1 115 64-138 PFHxS 397 9.1 36.26 U 108 72-124 PFNA 499 10 " 401.61 45.1 113 72-129 PFNS 465 10 " 401.61 19.3 111 74-127 PFOS 473 9.3 371.69 55.7 112 68-132 PFPeA 465 10 " 401.61 19.3 111 74-127 PFOS PFPS 416 465 10 " 401.61 27.3 109 75-122 PFPPS	8:2FTS	520	9.6	"	385.54	U	135	66-126			QM-2	
N-EFOSAA 537 10 401.61 401.61 U 134 50-168 N-MeFOSAA 489 10 401.61 U 122 47-169 PFBA 433 20 401.61 IU 125 47-169 PFBS 433 8.9 433 8.9 401.61 IU 119 53-156 PFDA 460 10 401.61 U 119 53-156 PFDS PFDS 407 9.7 401.61 U 115 30-172 PFBS PFBS 407 9.7 401.61 U 115 30-172 PFBS PFBA 447 10 401.61 13.8 108 75-122 PFBS PFBA 480 20 401.61 19.1 115 64-138 PFHXS PFNA 499 10 401.61 401.61 401.61 19.1 115 64-138 PFNA PFNS 397 9.1 401.61 401.61 45.1 113 72-129 PFNS PFNS 394 9.6 405 10 401.61 19.3 111 74-127 PFOS 473 9.3 371.69 55.7 112 68-132 PFPS PFPS 416 9.4 " 377.51 U 110 72-122	FOSA	415	10	"	401.61	U	103	61-138				
N-MeFOSAA	HFPO-DA	384	20	"	401.61	U	95.5	45-129				
PFBA 433 20 " 401.61 15.5 104 60-141 PFBS 433 8.9 " 355.42 30.6 113 62-135 PFDA 479 10 " 401.61 U 119 53-156 PFDOA 460 10 " 401.61 U 115 30-172 PFDS 407 9.7 " 387.55 U 105 44-151 PFHpA 447 10 " 401.61 13.8 108 75-122 PFHpS 422 19 " 381.53 U 111 66-132 PFHxS 397 9.1 " 366.26 U 108 72-124 PFNA 499 10 " 401.61 45.1 113 72-129 PFNS 394 9.6 " 385.54 U 102 61-126 PFOS 473 9.3 " 371.69 55.7 112 68-132 PFPeA 465 10 " 401.61	N-EtFOSAA	537	10	"	401.61	U	134	50-168				
PFBS 433 8.9 " 355.42 30.6 113 62-135 PFDA 479 10 " 401.61 U 119 53-156 PFDOA 460 10 " 401.61 U 115 30-172 PFDS 407 9.7 " 387.55 U 105 44-151 PFHDA 447 10 " 401.61 13.8 108 75-122 PFHpS 422 19 " 381.53 U 111 66-132 PFHXA 480 20 " 401.61 19.1 115 64-138 PFHXS 397 9.1 " 366.26 U 108 72-124 PFNA 499 10 " 401.61 45.1 113 72-129 PFNS 394 9.6 " 385.54 U 102 61-126 PFOA 465 10 " 401.61 19.3 111 74-127 PFPeA 465 10 " 401.61	N-MeFOSAA	489	10	"	401.61	U	122	47-169				
PFDA 479 10 " 401.61 U 119 53-156 PFDoA 460 10 " 401.61 U 115 30-172 PFDS 407 9.7 " 387.55 U 105 44-151 PFHpA 447 10 " 401.61 13.8 108 75-122 PFHpS 422 19 " 381.53 U 111 66-132 PFHxA 480 20 " 401.61 19.1 115 64-138 PFHxS 397 9.1 " 366.26 U 108 72-124 PFNA 499 10 " 401.61 45.1 113 72-129 PFNS 394 9.6 " 385.54 U 102 61-126 PFOS 473 9.3 " 371.69 55.7 112 68-132 PFPeA 465 10 " 401.61 27.3 109 75-122 PFPES 416 9.4 " 377.51	PFBA	433	20	"	401.61	15.5	104	60-141				
PFDoA 460 10 " 401.61 U 115 30-172 PFDS 407 9.7 " 387.55 U 105 44-151 PFHpA 447 10 " 401.61 13.8 108 75-122 PFHpS 422 19 " 381.53 U 111 66-132 PFHxA 480 20 " 401.61 19.1 115 64-138 PFHxS 397 9.1 " 366.26 U 108 72-124 PFNA 499 10 " 401.61 45.1 113 72-129 PFNS 394 9.6 " 385.54 U 102 61-126 PFOA 465 10 " 401.61 19.3 111 74-127 PFOS 473 9.3 " 371.69 55.7 112 68-132 PFPeA 465 10 " 401.61 27.3 109 75-122 PFPeS 416 9.4 " 377.51 </td <td>PFBS</td> <td>433</td> <td>8.9</td> <td>"</td> <td>355.42</td> <td>30.6</td> <td>113</td> <td>62-135</td> <td></td> <td></td> <td></td>	PFBS	433	8.9	"	355.42	30.6	113	62-135				
PFDS 407 9.7 " 387.55 U 105 44-151 PFHpA 447 10 " 401.61 13.8 108 75-122 PFHpS 422 19 " 381.53 U 111 66-132 PFHxA 480 20 " 401.61 19.1 115 64-138 PFHxS 397 9.1 " 366.26 U 108 72-124 PFNA 499 10 " 401.61 45.1 113 72-129 PFNS 394 9.6 " 385.54 U 102 61-126 PFOA 465 10 " 401.61 19.3 111 74-127 PFOS 473 9.3 " 371.69 55.7 112 68-132 PFPeA 465 10 " 401.61 27.3 109 75-122 PFPeS 416 9.4 " 377.51 U 110 72-122	PFDA	479	10	"	401.61	U	119	53-156				
PFHpA 447 10 " 401.61 13.8 108 75-122 PFHpS 422 19 " 381.53 U 111 66-132 PFHxA 480 20 " 401.61 19.1 115 64-138 PFHxS 397 9.1 " 366.26 U 108 72-124 PFNA 499 10 " 401.61 45.1 113 72-129 PFNS 394 9.6 " 385.54 U 102 61-126 PFOA 465 10 " 401.61 19.3 111 74-127 PFOS 473 9.3 " 371.69 55.7 112 68-132 PFPeA 465 10 " 401.61 27.3 109 75-122 PFPeS 416 9.4 " 377.51 U 110 72-122	PFDoA	460	10	"	401.61	U	115	30-172				
PFHpS 422 19 " 381.53 U 111 66-132 PFHxA 480 20 " 401.61 19.1 115 64-138 PFHxS 397 9.1 " 366.26 U 108 72-124 PFNA 499 10 " 401.61 45.1 113 72-129 PFNS 394 9.6 " 385.54 U 102 61-126 PFOA 465 10 " 401.61 19.3 111 74-127 PFOS 473 9.3 " 371.69 55.7 112 68-132 PFPeA 465 10 " 401.61 27.3 109 75-122 PFPeS 416 9.4 " 377.51 U 110 72-122	PFDS	407	9.7	"	387.55	U	105	44-151				
PFHxA 480 20 " 401.61 19.1 115 64-138 PFHxS 397 9.1 " 366.26 U 108 72-124 PFNA 499 10 " 401.61 45.1 113 72-129 PFNS 394 9.6 " 385.54 U 102 61-126 PFOA 465 10 " 401.61 19.3 111 74-127 PFOS 473 9.3 " 371.69 55.7 112 68-132 PFPeA 465 10 " 401.61 27.3 109 75-122 PFPeS 416 9.4 " 377.51 U 110 72-122	PFHpA	447	10	"	401.61	13.8	108	75-122				
PFHxS 397 9.1 " 366.26 U 108 72-124 PFNA 499 10 " 401.61 45.1 113 72-129 PFNS 394 9.6 " 385.54 U 102 61-126 PFOA 465 10 " 401.61 19.3 111 74-127 PFOS 473 9.3 " 371.69 55.7 112 68-132 PFPeA 465 10 " 401.61 27.3 109 75-122 PFPeS 416 9.4 " 377.51 U 110 72-122	PFHpS	422	19	"	381.53	U	111	66-132				
PFNA 499 10 " 401.61 45.1 113 72-129 PFNS 394 9.6 " 385.54 U 102 61-126 PFOA 465 10 " 401.61 19.3 111 74-127 PFOS 473 9.3 " 371.69 55.7 112 68-132 PFPeA 465 10 " 401.61 27.3 109 75-122 PFPeS 416 9.4 " 377.51 U 110 72-122	PFHxA	480	20	"	401.61	19.1	115	64-138				
PFNS 394 9.6 " 385.54 U 102 61-126 PFOA 465 10 " 401.61 19.3 111 74-127 PFOS 473 9.3 " 371.69 55.7 112 68-132 PFPeA 465 10 " 401.61 27.3 109 75-122 PFPeS 416 9.4 " 377.51 U 110 72-122	PFHxS	397	9.1	"	366.26	U	108	72-124				
PFOA 465 10 " 401.61 19.3 111 74-127 PFOS 473 9.3 " 371.69 55.7 112 68-132 PFPeA 465 10 " 401.61 27.3 109 75-122 PFPeS 416 9.4 " 377.51 U 110 72-122	PFNA	499	10	"	401.61	45.1	113	72-129				
PFOS 473 9.3 " 371.69 55.7 112 68-132 PFPeA 465 10 " 401.61 27.3 109 75-122 PFPeS 416 9.4 " 377.51 U 110 72-122	PFNS	394	9.6	"	385.54	U	102	61-126				
PFPeA 465 10 " 401.61 27.3 109 75-122 PFPeS 416 9.4 " 377.51 U 110 72-122	PFOA	465	10	"	401.61	19.3	111	74-127				
PFPeS 416 9.4 " 377.51 U 110 72-122	PFOS	473	9.3	"	371.69	55.7	112	68-132				
	PFPeA	465	10	"	401.61	27.3	109	75-122				
DET.DA 404 20 " 40171 II 102 10404	PFPeS	416	9.4	"	377.51	U	110	72-122				
rrieDA 494 20 " 401.61 U 123 10-194	PFTeDA	494	20	"	401.61	U	123	10-194				



Region 4 Laboratory Services and Applied Science Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 23-0151

Project: 23-0151, Sanford Cleaners - Reported by Floyd Wellborn

Semi Volatile Organics (SVOA) - Quality Control **US-EPA, Region 4, LSASD**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2304003 - S PFC										
Matrix Spike (2304003-MS1)	Sou	rce: E231202-0)7RE1	Prepared: 0	4/05/23 A	nalyzed: 04	/06/23			
PFTrDA	448	10	ng/L	401.61	U	111	10-193			
PFUdA	466	10	"	401.61	U	116	44-164			
Matrix Spike Dup (2304003-MSD1)	Soui	rce: E231202-()7RE1	Prepared: 0	4/05/23 A	nalyzed: 04	-/06/23			
ASTM D7979-19										
4:2FTS	915	9.4	ng/L	374.00	U	245	70-133	0.198	34	QM-2
6:2FTS	476	9.5	"	380.00	U	125	58-143	5.54	45	
8:2FTS	564	9.6	"	384.00	U	147	66-126	8.23	56	QM-2
FOSA	435	10	"	400.00	U	109	61-138	4.78	39	
HFPO-DA	388	20	"	400.00	U	97.0	45-129	1.12	57	
N-EtFOSAA	561	10	"	400.00	U	140	50-168	4.36	53	
N-MeFOSAA	478	10	"	400.00	U	119	47-169	2.41	65	
PFBA	439	20	"	400.00	15.5	106	60-141	1.42	37	
PFBS	427	8.8	"	354.00	30.6	112	62-135	1.28	32	
PFDA	483	10	"	400.00	U	121	53-156	0.885	57	
PFDoA	482	10	"	400.00	U	121	30-172	4.62	56	
PFDS	421	9.6	"	386.00	U	109	44-151	3.26	66	
PFHpA	463	10	"	400.00	13.8	112	75-122	3.48	26	
PFHpS	424	19	"	380.00	U	111	66-132	0.405	28	
PFHxA	481	20	"	400.00	19.1	116	64-138	0.353	42	
PFHxS	429	9.1	"	364.80	U	117	72-124	7.62	32	
PFNA	511	10	"	400.00	45.1	117	72-129	2.51	31	
PFNS	400	9.6	"	384.00	U	104	61-126	1.67	35	
PFOA	465	10	"	400.00	19.3	111	74-127	0.0333	32	
PFOS	473	9.3	"	370.20	55.7	113	68-132	0.0322	37	
PFPeA	463	10	"	400.00	27.3	109	75-122	0.433	27	
PFPeS	398	9.4	"	376.00	U	106	72-122	4.60	29	
PFTeDA	571	20	"	400.00	U	143	10-194	14.4	111	
PFTrDA	488	10	"	400.00	U	122	10-193	8.69	106	
PFUdA	476	10	"	400.00	U	119	44-164	2.19	48	



Region 4 Laboratory Services and Applied Science Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 23-0151

Project: 23-0151, Sanford Cleaners - Reported by Floyd Wellborn

Semi Volatile Organics (SVOA) - Quality Control US-EPA, Region 4, LSASD

Batch 2304003 - S PFC MRL Verification (2304003-PS1) Prepared: 04/05/23 Analyzed: 04/06/23 ASTM D7979-19 4:2FTS 8.75 9.4 ngL 9.3500 9.36 47.1-145 6:2FTS 5.14 9.5 9.6000 90.2 36.4-156 6:0SA 9.47 10 9.6000 94.7 37.7-168 N-EiFOSAA 9.31 10 9.000 94.7 37.7-168 N-EiFOSAA 9.37 8.8 9.000 90.2 36.4-156 PFBS 9.07 8.8 9.000 90.2 27.2-205 N-MeFOSAA 9.90 10 9.000 90.2 27.4-182 PFBS 9.07 8.8 8.8500 102 48.2-138 PFDAA 9.02 10 9.000 90.2 27.4-182 PFDA 9.98 9.6 9.6500 103 15.1-188 PFIBA 10.0 9.1 9.1000 110 49.5-138	RPD Limit Notes	RPD	%REC Limits	%REC	Source Result	Spike Level	Units	Reporting Limit	Result	Analyte
ASTM D7979-19 4:2PTS										Batch 2304003 - S PFC
42FTS 8.75 9.4 ng/L 9.3500 93.6 47.1-145 62FTS 5.14 9.5 " 9.5000 54.1 29.2-154 8.2FTS 8.65 9.6 " 9.6000 90.2 36.4-156 FOSA 9.47 10 " 10.000 94.7 37.7-168 N-EIFOSAA 9.31 10 " 10.000 79.6 23.2-198 N-MEFOSAA 7.96 10 " 10.000 79.6 23.2-198 PFBS 9.07 8.8 " 8.8500 102 48.2-138 PFDA 9.02 10 " 10.000 90.2 27.4-182 PFDA 9.02 10 " 10.000 83.9 36.5-175 PFDS 9.98 9.6 " 9.6500 103 15.1-188 PFHpA 11.3 10 " 10.000 133 52.8-136 PFHsS 10.0 9.1 " 9.1200 110 49.5-138 PFNA 8.48 10 " 10.000 84.8 44.1-148 PFNS 9.82 9.6 " 9.6000 102 43.3-146 PFOA 11.0 10 " 10.000 110 46.7-142 PFOA 11.0 10 " 10.000 110 46.7-142 PFOS 12.7 9.3 " 9.2550 137 50.4-142 PFPA 12.1 10 " 10.000 12 43.3-146 PFPA 12.1 10 " 10.000 12 45.2-135 PFPES 9.38 9.4 " 9.4000 99.8 49-137 PFTDA 10.7 10 " 10.000 17 12.2-235 PFPUA 8.79 10 " 10.000 17 12.2-235 PFUA 8.79 10 " 20.000 102 47.9-138 PFUA 9.799-19			/06/23	nalyzed: 04	4/05/23 An	Prepared: 0				MRL Verification (2304003-PS1)
September Sept										ASTM D7979-19
8.61	MRL-2		47.1-145	93.6		9.3500	ng/L	9.4	8.75	4:2FTS
POSA 9.47 10 " 10.000 94.7 37.7-168 N-EIFOSAA 9.31 10 " 10.000 93.1 27.2-205 N-MGFOSAA 7.96 10 " 10.000 79.6 23.2-198 PFBS 9.07 8.8 " 8.8500 102 48.2-138 PFDA 9.02 10 " 10.000 90.2 27.4-182 PFDA 9.02 10 " 10.000 90.2 27.4-182 PFDA 9.98 9.6 " 9.6500 103 15.1-188 PFHpA 11.3 10 " 10.000 113 52.8-136 PFHxS 10.0 9.1 " 9.1200 110 49.5-138 PFNA 8.48 10 " 10.000 84.8 44.1-148 PFNS 9.82 9.6 " 9.6000 102 43.3-146 PFOA 11.0 10 10 10 10 10 10 10 10 10 10 46.7-142 PFOS 12.7 9.3 " 9.2550 137 50.4-142 PFOS 12.7 9.3 " 9.2550 137 50.4-142 PFPAA 12.1 10 " 10.000 12 43.3-146 PFPAA 12.1 10 " 10.000 12 43.3-17 PFTDA 10.7 10 " 10.000 107 12.2-235 PFUDA 8.79 10 " 10.000 87.9 45.8-162 MRL Verification (2304003-PS2) Prepared: 04/05/23 Analyzed: 04/06/23 ASTM D7979-19 HFPO-DA 24.1 20 ng/L 20.000 12 47.9-138 PFHpS	MRL-2		29.2-154	54.1		9.5000	"	9.5	5.14	6:2FTS
N-EIFOSAA 9.31 10 " 10.000 93.1 27.2-205 N-MeFOSAA 7.96 10 " 10.000 79.6 23.2-198 PFBS 9.07 8.8 " 8.8500 102 48.2-138 PFDA 9.02 10 " 10.000 90.2 27.4-182 PFDoA 8.39 10 " 10.000 83.9 36.5-175 PFDS 9.98 9.6 " 9.6500 103 15.1-188 PFHpA 11.3 10 " 10.000 113 52.8-136 PFHpA 11.3 10 " 10.000 113 52.8-136 PFHNA 8.48 10 " 10.000 84.8 44.1-148 PFNS 9.82 9.6 " 9.6000 102 43.3-146 PFOA 11.0 10 " 10.000 110 46.7-142 PFOS 12.7 9.3 " 9.2550 137 50.4-142 PFPeA 12.1 10 " 10.000 12 52-135 PFPePA 12.1 10 " 10.000 12 52-135 PFPES 9.38 9.4 " 9.4000 99.8 49-137 PFTrDA 10.7 10 " 10.000 107 12.2-235 PFUDA 8.79 10 " 10.000 87.9 45.8-162 MRL Verification (2304003-PS2) MRL Verification (2304003-PS2) ASTM D7979-19 HFPO-DA 24.1 20 ng/L 20.000 102 47.9-138 PFHpS 22.0 19 " 19.000 116 39.7-150	MRL-2		36.4-156	90.2		9.6000	"	9.6	8.65	8:2FTS
N-MeFOSAA 7,96 10 " 10,000 79,6 23,2-198 PFBS 9,07 8,8 " 8,8500 102 48,2-138 PFDA 9,02 10 " 10,000 90,2 27,4-182 PFDoA 8,39 10 " 10,000 83,9 36,5-175 PFDS 9,98 9,6 " 9,6500 103 15,1-188 PFHpA 11,3 10 " 10,000 113 52,8-136 PFHxS 10,0 9,1 " 9,1200 110 49,5-138 PFNA 8,48 10 " 10,000 84,8 44,1-148 PFNS 9,82 9,6 " 9,6000 102 43,3-146 PFOA 11,0 10 " 10,000 110 46,7-142 PFOA 11,0 10 " 10,000 110 46,7-142 PFPOA 12,1 10 " 10,000 110 46,7-142 PFPES 9,38 9,4 " 9,4000 99,8 49-137 PFTrDA 10,7 10 " 10,000 107 12,2-235 PFPES 9,38 9,4 " 9,4000 99,8 49-137 PFTrDA 10,7 10 " 10,000 107 12,2-235 PFUdA 8,79 10 " 10,000 107 12,2-235 PFUDA PFUDA 10,7 10 " 10,000 107 12,2-235 PFUDA PFUDA PFUDA 10,7 10 " 10,000 107 11,000 107 12,2-235 PFUDA	MRL-2		37.7-168	94.7		10.000	"	10	9.47	FOSA
PFBS 9.07 8.8 " 8.8500 102 48.2-138 PFDA 9.02 10 " 10.000 90.2 27.4-182 PFDA 8.39 10 " 10.000 83.9 36.5-175 PFDS 9.98 9.6 " 9.6500 103 15.1-188 PFHpA 11.3 10 " 10.000 113 52.8-136 PFHxS 10.0 9.1 " 9.1200 110 49.5-138 PFNA 8.48 10 " 10.000 84.8 44.1-148 PFNS 9.82 9.6 " 9.6000 102 43.3-146 PFOA 11.0 10 " 10.000 110 46.7-142 PFOS 12.7 9.3 " 9.2550 137 50.4-142 PFPES 9.38 9.4 " 9.4000 99.8 49-137 PFTDA 10.7 10 " 10.000 107 12.2-235 PFUDA 8.79 10 " 10.000 <	MRL-2		27.2-205	93.1		10.000	"	10	9.31	N-EtFOSAA
PFDA 9.02 10 " 10.000 90.2 27.4-182 PFDOA 8.39 10 " 10.000 83.9 36.5-175 PFDS 9.98 9.6 " 9.6500 103 15.1-188 PFHPA 11.3 10 " 10.000 113 52.8-136 PFHXS 10.0 9.1 " 9.1200 110 49.5-138 PFNA 8.48 10 " 10.000 84.8 44.1-148 PFNS 9.82 9.6 " 9.6000 102 43.3-146 PFOA 11.0 10 " 10.000 110 46.7-142 PFOS 12.7 9.3 " 9.2550 137 50.4-142 PFPEA 12.1 10 " 10.000 121 52-135 PFPES 9.38 9.4 " 9.4000 99.8 49-137 PFTDA 10.7 10 " 10.000 107 12.2-235 PFUDA 8.79 10 " 10.000 <t< td=""><td>MRL-2</td><td></td><td>23.2-198</td><td>79.6</td><td></td><td>10.000</td><td>"</td><td>10</td><td>7.96</td><td>N-MeFOSAA</td></t<>	MRL-2		23.2-198	79.6		10.000	"	10	7.96	N-MeFOSAA
PFDOA 8.39 10 " 10.000 83.9 36.5-175 PFDS 9.98 9.6 " 9.6500 103 15.1-188 PFHpA 11.3 10 " 10.000 113 52.8-136 PFHxS 10.0 9.1 " 9.1200 110 49.5-138 PFNA 8.48 10 " 10.000 84.8 44.1-148 PFNS 9.82 9.6 " 9.6000 102 43.3-146 PFOA 11.0 10 " 10.000 110 46.7-142 PFOS 12.7 9.3 " 9.2550 137 50.4-142 PFPeA 12.1 10 " 10.000 121 52-135 PFPeS 9.38 9.4 " 9.4000 99.8 49-137 PFTrDA 10.7 10 " 10.000 107 12.2-235 PFUDA 8.79 10 " 10.000 87.9 45.8-162 MRL Verification (2304003-PS2) Prepared: 04/05/23 Analyzed: 04/06/23 ASTM D7979-19 HFPO-DA 24.1 20 ng/L 20.000 12 31.3-147 PFBA 20.4 20 " 20.000 102 47.9-138 PFHpS 22.0 19 " 19.000 116 39.7-150	MRL-2		48.2-138	102		8.8500	"	8.8	9.07	PFBS
PFDS 9.98 9.6 " 9.6500 103 15.1-188 PFHpA 11.3 10 " 10.000 113 52.8-136 PFHxS 10.0 9.1 " 9.1200 110 49.5-138 PFNA 8.48 10 " 10.000 84.8 44.1-148 PFNS 9.82 9.6 " 9.6000 102 43.3-146 PFOA 11.0 10 " 10.000 110 46.7-142 PFOS 12.7 9.3 " 9.2550 137 50.4-142 PFPeA 12.1 10 " 10.000 121 52-135 PFPeS 9.38 9.4 " 9.4000 99.8 49-137 PFTrDA 10.7 10 " 10.000 107 12.2-235 PFUdA 8.79 10 " 10.000 87.9 45.8-162 MRL Verification (2304003-PS2) Prepared: 04/05/23 Analyzed: 04/06/23 ASTM D7979-19 HFPO-DA 24.1 <t< td=""><td>MRL-2</td><td></td><td>27.4-182</td><td>90.2</td><td></td><td>10.000</td><td>"</td><td>10</td><td>9.02</td><td>PFDA</td></t<>	MRL-2		27.4-182	90.2		10.000	"	10	9.02	PFDA
PFHpA 11.3 10 " 10.000 113 52.8-136 PFHxS 10.0 9.1 " 9.1200 110 49.5-138 PFNA 8.48 10 " 10.000 84.8 44.1-148 PFNS PFNS 9.82 9.6 " 9.6000 102 43.3-146 PFOA 11.0 10 " 10.000 110 46.7-142 PFOS 12.7 9.3 " 9.2550 137 50.4-142 PFPeA 12.1 10 " 10.000 121 52-135 PFPeS 9.38 9.4 " 9.4000 99.8 49-137 PFTrDA 10.7 10 " 10.000 107 12.2-235 PFUdA 8.79 10 " 10.000 107 12.2-235 PFUdA 8.79 10 " 10.000 87.9 45.8-162 MRL Verification (2304003-PS2) ASTM D7979-19 HFPO-DA 24.1 20 ng/L 20.000 102 47.9-138 PFHpS 22.0 19 " 19.000 116 39.7-150	MRL-2		36.5-175	83.9		10.000	"	10	8.39	PFDoA
PFHxS 10.0 9.1 " 9.1200 110 49.5-138 PFNA 8.48 10 " 10.000 84.8 44.1-148 PFNS PFNS 9.82 9.6 " 9.6000 102 43.3-146 PFOA PFOA 11.0 10 " 10.000 110 46.7-142 PFOS 12.7 9.3 " 9.2550 137 50.4-142 PFPeA 12.1 10 " 10.000 121 52-135 PFPeS 9.38 9.4 " 9.4000 99.8 49-137 PFTrDA PFTrDA 10.7 10 " 10.000 107 12.2-235 PFUdA 8.79 10 " 10.000 87.9 45.8-162 MRL Verification (2304003-PS2) Prepared: 04/05/23 Analyzed: 04/06/23 ASTM D7979-19 HFPO-DA 24.1 20 ng/L 20.000 121 31.3-147 PFBA 20.4 20 " 20.000 102 47.9-138 PFHpS	MRL-2		15.1-188	103		9.6500	"	9.6	9.98	PFDS
PFNA 8.48 10 " 10.000 84.8 44.1-148 PFNS 9.82 9.6 " 9.6000 102 43.3-146 PFOA 11.0 10 " 10.000 110 46.7-142 PFOS 12.7 9.3 " 9.2550 137 50.4-142 PFPEA 12.1 10 " 10.000 121 52-135 PFPES 9.38 9.4 " 9.4000 99.8 49-137 PFTrDA 10.7 10 " 10.000 107 12.2-235 PFUdA 8.79 10 " 10.000 87.9 45.8-162 MRL Verification (2304003-PS2) MRL Verification (2304003-PS2) ASTM D7979-19 HFPO-DA 24.1 20 ng/L 20.000 121 31.3-147 PFBA 20.4 20 " 20.000 102 47.9-138 PFHpS 22.0 19 " 19.000 116 39.7-150	MRL-2		52.8-136	113		10.000	"	10	11.3	PFHpA
PFNS 9.82 9.6 " 9.6000 102 43.3-146 PFOA 11.0 10 " 10.000 110 46.7-142 PFOS 12.7 9.3 " 9.2550 137 50.4-142 PFPeA 12.1 10 " 10.000 121 52-135 PFPeS 9.38 9.4 " 9.4000 99.8 49-137 PFTrDA 10.7 10 " 10.000 107 12.2-235 PFUdA 8.79 10 " 10.000 87.9 45.8-162 MRL Verification (2304003-PS2) ASTM D7979-19 HFPO-DA 24.1 20 ng/L 20.000 121 31.3-147 PFBA 20.4 20 " 20.000 102 47.9-138 PFHpS 22.0 19 " 19.000 116 39.7-150	MRL-2		49.5-138	110		9.1200	"	9.1	10.0	PFHxS
PFOA 11.0 10 " 10.000 110 46.7-142 PFOS 12.7 9.3 " 9.2550 137 50.4-142 PFPEA 12.1 10 " 10.000 121 52-135 PFPES 9.38 9.4 " 9.4000 99.8 49-137 PFTrDA 10.7 10 " 10.000 107 12.2-235 PFUdA 8.79 10 " 10.000 87.9 45.8-162 MRL Verification (2304003-PS2) Prepared: 04/05/23 Analyzed: 04/06/23 ASTM D7979-19 HFPO-DA 24.1 20 ng/L 20.000 121 31.3-147 PFBA 20.4 20 " 20.000 102 47.9-138 PFHpS 22.0 19 " 19.000 116 39.7-150	MRL-2		44.1-148	84.8		10.000	"	10	8.48	PFNA
PFOS 12.7 9.3 " 9.2550 137 50.4-142 PFPeA 12.1 10 " 10.000 121 52-135 PFPeS 9.38 9.4 " 9.4000 99.8 49-137 PFTrDA 10.7 10 " 10.000 107 12.2-235 PFUdA 8.79 10 " 10.000 87.9 45.8-162 MRL Verification (2304003-PS2) ASTM D7979-19 HFPO-DA 24.1 20 ng/L 20.000 121 31.3-147 PFBA 20.4 20 " 20.000 102 47.9-138 PFHpS 22.0 19 " 19.000 116 39.7-150	MRL-2		43.3-146	102		9.6000	"	9.6	9.82	PFNS
PFPeA 12.1 10 " 10.000 121 52-135 PFPeS 9.38 9.4 " 9.4000 99.8 49-137 PFTrDA 10.7 10 " 10.000 107 12.2-235 PFUdA 8.79 10 " 10.000 87.9 45.8-162 MRL Verification (2304003-PS2) Prepared: 04/05/23 Analyzed: 04/06/23 ASTM D7979-19 HFPO-DA 24.1 20 ng/L 20.000 121 31.3-147 PFBA 20.4 20 " 20.000 102 47.9-138 PFHpS 22.0 19 " 19.000 116 39.7-150	MRL-2		46.7-142	110		10.000	"	10	11.0	PFOA
PFPeS 9.38 9.4 " 9.4000 99.8 49-137 PFTrDA 10.7 10 " 10.000 107 12.2-235 PFUdA 8.79 10 " 10.000 87.9 45.8-162 MRL Verification (2304003-PS2) Prepared: 04/05/23 Analyzed: 04/06/23 ASTM D7979-19 HFPO-DA 24.1 20 ng/L 20.000 121 31.3-147 PFBA 20.4 20 " 20.000 102 47.9-138 PFHpS 22.0 19 " 19.000 116 39.7-150	MRL-2		50.4-142	137		9.2550	"	9.3	12.7	PFOS
PFTrDA 10.7 10 " 10.000 107 12.2-235 PFUdA 8.79 10 " 10.000 87.9 45.8-162 MRL Verification (2304003-PS2) Prepared: 04/05/23 Analyzed: 04/06/23 ASTM D7979-19 HFPO-DA 24.1 20 ng/L 20.000 121 31.3-147 PFBA 20.4 20 " 20.000 102 47.9-138 PFHpS 22.0 19 " 19.000 116 39.7-150	MRL-2		52-135	121		10.000	"	10	12.1	PFPeA
PFUdA 8.79 10 " 10.000 107 12.22-23 MRL Verification (2304003-PS2) Prepared: 04/05/23 Analyzed: 04/06/23 ASTM D7979-19 HFPO-DA 24.1 20 ng/L 20.000 121 31.3-147 PFBA 20.4 20 " 20.000 102 47.9-138 PFHpS 22.0 19 " 19.000 116 39.7-150	MRL-2		49-137	99.8		9.4000	"	9.4	9.38	PFPeS
MRL Verification (2304003-PS2) ASTM D7979-19 HFPO-DA 24.1 20 ng/L 20.000 121 31.3-147 PFBA 20.4 20 " 20.000 102 47.9-138 PFHpS 22.0 19 " 19.000 116 39.7-150	MRL-2		12.2-235	107		10.000	"	10	10.7	PFTrDA
ASTM D7979-19 HFPO-DA 24.1 20 ng/L 20.000 121 31.3-147 PFBA 20.4 20 " 20.000 102 47.9-138 PFHpS 22.0 19 " 19.000 116 39.7-150	MRL-2		45.8-162	87.9		10.000	"	10	8.79	PFUdA
HFPO-DA 24.1 20 ng/L 20.000 121 31.3-147 PFBA 20.4 20 " 20.000 102 47.9-138 PFHpS 22.0 19 " 19.000 116 39.7-150			/06/23	nalyzed: 04	4/05/23 An	Prepared: 0				MRL Verification (2304003-PS2)
HFPO-DA 24.1 20 ng/L 20.000 121 31.3-147 PFBA 20.4 20 " 20.000 102 47.9-138 PFHpS 22.0 19 " 19.000 116 39.7-150										ASTM D7979-19
PFHpS 22.0 19 " 19.000 116 39.7-150	MRL-2		31.3-147	121		20.000	ng/L	20	24.1	
·	MRL-2		47.9-138	102		20.000	"	20	20.4	PFBA
PFHxA 19.9 20 " 20.000 99.7 42.6-147	MRL-2		39.7-150	116		19.000	"	19	22.0	PFHpS
	MRL-2		42.6-147	99.7		20.000	"	20	19.9	PFHxA
PFTeDA 18.4 20 " 20.000 92.1 22.9-199	MRL-2		22.9-199	92.1		20.000	"	20	18.4	PFTeDA



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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Laboratory Services and Applied Science Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 23-0151

Project: 23-0151, Sanford Cleaners - Reported by Floyd Wellborn

Notes and Definitions for QC Samples

U	The analyte was not detected at or above the reporting limit.
MRL-2	MRL verification for Non-Potable Water matrix
QL-2	Laboratory Control Spike Recovery greater than method control limits
QM-2	Matrix Spike Recovery greater than method control limits

End of Report